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RESEARCH PROGRAM ON THE
TRAINING OF
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No. 5

VOCATIONAL TRAINING PROGRAM
IN CANADA

C. - Vocational Education in Agriculture

Publicly - Operated



Department of Labour, Canada,
in co-operation with federal and
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Canada. Interdepartmental Skilled Manpower Training
Research Committee.
Report.

Research Program on the
Training of Skilled Manpower

No. 5 - VOCATIONAL TRAINING PROGRAMS IN CANADA

C. - Vocational Education in Agriculture

Publicly Operated

Preliminary report of a survey made by the Training Branch of the Department of Labour in co-operation with the Provincial Departments of Education and Agriculture, under the general direction of the Interdepartmental Skilled Manpower Training Research Committee.

Department of Labour, Canada,
in co-operation with federal and
provincial government agencies and
other groups

June 1959

C O N T E N T S

	<u>Page</u>
INTRODUCTION	1
Method of Survey	1
Organization of the Report	1
 SUMMARY	 3
General Findings	3
Diploma Courses in Agriculture	5
Agriculture Education in High Schools	12
Agricultural Short Courses, Study Groups and Clubs	17
The National Farm Radio Forum	24
Training for Employment on Farms	24
 TRAINING PROGRAMS IN THE PROVINCES	 26
Newfoundland	26
Prince Edward Island	29
Nova Scotia	32
New Brunswick	38
Quebec	42
Ontario	48
Manitoba	58
Saskatchewan	64
Alberta	71
British Columbia	81
 APPENDIX	
(1) Extracts from a Statement made to the National Vocational Training Advisory Council by J.A. Ferguson Representing the Canadian Federation of Agriculture, September 24, 1957.	87
(2) Objectives of the Schools of Agriculture in Alberta	88
(3) List of Home Farm Projects Suggested to Teachers of Agricultural Science and Agriculture in Ontario	89
(4) Extract from Regulations Governing 4-H Beef Calf Clubs in Alberta, 1959	91
(5) Extracts from a Brochure on 4-H Clubs in Nova Scotia	93
(6) Canadian Council on 4-H Clubs - Project Enrolment, 1958 ...	94
(7) Sample Program: Night School Classes at a British Columbia District High School	96
(8) Trends Toward Farm Business Management Studies: Extracts from the National Farm Radio Guide, December 8, 1958	97
(9) Vertigal Integration and Contract Farming: Extract from the National Farm Radio Guide, January 5, 1959	98
(10) Timetables, Agricultural Schools and Colleges	99

1	INTRODUCTION
1	Method of Survey
1	Organization of the Report
2	SUMMARY
2	General Findings
2	Diploma Courses in Agriculture
2	Agriculture Extension in High Schools
15	Agricultural Short Courses, Study Weeks and Camps
17	The National Farm Radio Forum
20	Training for Employment on Farms
20	TRAINING PROGRAMS IN THE PROVINCES
25	Newfoundland
25	Prince Edward Island
25	Nova Scotia
25	New Brunswick
25	Quebec
25	Ontario
25	Manitoba
25	Saskatchewan
25	Alberta
25	British Columbia
25	APPENDIX
25	(1) Extracts from a Report of the National Farm Radio Forum
25	Training Advantages
25	(2) Objectives of the Service of Agriculture in Alberta
25	(3) List of Home Farm Projects Registered in Alberta
25	Agricultural Extension and Agriculture in Ontario
25	(4) Extract from Legislation Governing 4-H Club in Ontario
25	in Alberta, 1930
25	(5) Extracts from a Brochure on 4-H Clubs in Nova Scotia
25	(6) Canadian Council on 4-H Clubs - Project Experiments, 1928
25	(7) Sample Program of Agricultural Extension at a School
25	Colombia District High School
25	(8) Trends toward Farm Extension in Ontario
25	Extracts from the National Farm Radio Forum
25	December 8, 1928
25	(9) Vertical Integration and Contract Farming
25	the National Farm Radio Forum, January 2, 1929
25	(10) Statistics, Agricultural Schools and Colleges

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FOREWORD

This report sets forth the results of a survey of the current technical and other vocational training programs in agriculture offered by provincial and municipal governments throughout Canada. It is one of a series of studies carried out under the Skilled Manpower Training Research Program begun by the Federal Department of Labour in 1956 in co-operation with other interested Federal and provincial departments and management and union organizations. The nature of this research program is set out in detail in the first of this series, entitled "Progress Report", issued in June 1957.

This is the second report dealing with technical and other vocational training facilities in Canada. Report No. 5A covered publicly-operated technical and trade training facilities. Other studies are being made dealing with commercial and business training programs and with training activities in Federal Government departments and agencies.

The research program on the training of skilled manpower in Canada, and the reports emanating from it, are under the direction of an Interdepartmental Skilled Manpower Training Research Committee. The membership of this committee at the present time is:

Department of Labour

George V. Haythorne, Asst. Deputy Minister, Chairman

Training Branch

C.R. Ford, Director

R.H. MacCuish

D.E. Bridge

Economics and Research Branch

W.R. Dymond, Director

J.P. Francis, Chief, Manpower Resources Division

P. Cohen, Training Research Section - Secretary

Civilian Rehabilitation Branch

Ian Campbell, Co-ordinator

Women's Division

Miss Marion Royce, Director

Unemployment Insurance Commission

T. Fishbourne, Chief, Employment Specialists Division, NES

D. Roy Snider

National Research Council

E.H. Stock, Personnel Services

Defence Research Board

H.W. Jamieson, Director of Personnel

Dominion Bureau of Statistics

F.E. Whitworth, Director, Education Division

J.M. Grandbois, Education Division

In addition to the members of the above committee, a number of others have assisted in the planning and preparation of this survey. They are S.N.R. Hodgins of the Department of Agriculture, R.W. Carbert of the Canadian Federation of Agriculture, A. Ouimet of the National Employment Service, and W.W. Dawson and D.R. Buchanan of the Department of Labour.

The survey and the preparation of this report were carried out by Mr. Newcombe Bentley who, through the co-operation of the Alberta Department of Agriculture, was released temporarily from his duties in that province while he was engaged for the purpose of undertaking the study under this program.

In carrying out the survey, Mr. Bentley visited every province in Canada and talked to many officials of the provincial Departments of Agriculture and Education. This report has been made possible by their co-operation and assistance. These officials include the following:

Newfoundland: P.J. Murray, Deputy Minister, Department of Resources.
Frank Templeman, Director of Vocational Education
A.C. Badcock, Director of Agriculture.

Prince Edward Island: M. MacKenzie, Deputy Minister of Education
S.C. Wright, Deputy Minister of Agriculture
E.D. MacPhail, Principal, Provincial Vocational School
S. David Peacock, Director of Field Work
R.C. Parent, Superintendent, Dominion Experimental Farm.

Nova Scotia: F.W. Walsh, Deputy Minister of Agriculture
Kenneth Cox, Principal, N.S. Agricultural College
G.W. MacKenzie, Assoc. Director of Curriculum, Dept. Education

New Brunswick: R.D. Gilbert, Deputy Minister of Agriculture
Stanley Wood, Director of Extension
Camille Chaisson, Director of Agricultural Education
J.W. McNutt, Director of Vocational Education
J.A. Galloway, District Agriculturist
R.W. Maxwell, Principal, Carleton County Voc. School
T.P. MacGregor, Principal, Fredericton Agricultural School

- Quebec: Rene Trepanier, Deputy Minister of Agriculture
Charles Magnon, Director, Agriculture Education Branch
George Gauthier, Director, Agricultural Information
Jean Paul Lettre, Assoc. Director, Education Branch
J.E. Audet, Supervisor of Junior Livestock Clubs
Phillippe Paquette, Supervisor of Junior Crop Clubs
- Ontario: C.W. Graham, Deputy Minister of Agriculture
R.G. Bennett, Chief Agricultural Officer
T.R. Hilliard, Director of Extension Services
K. Lantz, Associate Director of Extension
H.L. Patterson, Director of Farm Economics and Statistics
C.W. Booth, Deputy Minister in Charge of Secondary Education
A.L. Lakie, Assistant Superintendent Secondary Education
Norman Davies, Inspector in Charge of Agriculture Classes.
- Manitoba: J.R. Bell, Deputy Minister of Agriculture
H.E. Wood, Agriculture Consultant
D.C. Foster, Director, Extension Services
J.R. Weir, Dean, University of Manitoba
E.H. Lange, Director, Diploma Course in Agriculture
R.A. Robertson, Executive Assistant to the Deputy Minister
B.F. Addy, Director of Vocational Education
- Saskatchewan: W.H. Horner, Deputy Minister of Agriculture
A. McCallum, Deputy Minister of Education
K.A. Stilborn, Director, School of Agriculture
Rupert D. Ramsay, Director, Department of Extension
Lorne C. Paul, Associate Director, Department of Education
Margaret H. Pattilo, Director, Women's Service
J.A. Doyle, Regional Director, Canadian Vocational Training
J.W. Clarke, Agricultural Supervisor.
- Alberta: R.M. Putnam, Deputy Minister of Agriculture
A.B. Evenson, Associate Director of Curriculum, Dept. Ed.
R.E. Byron, Director of Vocational Education
S.C. Acheson, Supervisor, Agricultural Mechanics,
Institute of Technology
H.C. Rhodes, Agriculture Instructor, Red Deer Composite High Sch.
J.E. Hawker, Superintendent, Schools of Agriculture,
Department of Agriculture
F.H. Newcombe, Director Agricultural Extension, Department of
Agriculture.
- British Columbia: Newton P. Steacy, Minister of Agriculture
William MacGillivray, Deputy Minister of Agriculture
G.L. Landon, Director of Extension, Department of Agriculture
Echo Lidster, Director, 4-H Clubs
L.W. Johnson, Supervisor, Farmers' Institutes
J. White, Director of Vocational Education
W.H. Grant, Inspector-in-Charge, Agriculture Education
Dean Eagles, Faculty of Agriculture U.B.C.
John K. Friesen, Director of Extension, U.B.C.
Graham Drew, Agricultural Supervisor, Department of Extension
Neil MacGregor, Agriculture Instructor, Chilliwack

INTRODUCTION

This report covers programs of vocational education in agriculture conducted throughout Canada during 1958 and the winter of 1958-59. It concerns training for engagement in agricultural production and does not include professional or degree programs at universities nor the training of persons for employment in jobs relating to agriculture such as sales or services to farmers or the processing of farm products.

Provision for education in agriculture exists in every province of Canada. There is no federal agency nor any national organization of personnel engaged in this field of training. Some exchange of information among the responsible provincial agencies is encouraged through the Vocational Training Branch and the National Vocational Training Advisory Council of the Canadian Department of Labour. The provincial programs have, however, tended to develop independently in response to different conditions and needs throughout the country.

Provincial officials charged with responsibilities in the formulation of policy as well as those engaged directly in conducting the programs of education in agriculture co-operated wholeheartedly in providing data for this report and in discussing associated problems. They expressed keen interest in learning details of courses, facilities, regulations, problems and trends in the other provinces. This report is an attempt to record this information.

METHOD OF SURVEY

Following preliminary discussions with members of the advisory sub-committee, field trips were made to each of the provinces. Officials of the Provincial Departments of Agriculture and Education were contacted, annual reports were studied and centres where major programs were in effect were inspected. Draft copies of the reports on each province were then submitted to the appropriate provincial officials for comment and checking as to accuracy and completeness, and changes were made in the text in the light of their observations.

ORGANIZATION OF THE REPORT

The report includes a Summary in which salient features of provincial programs are presented in outline, to reflect the national picture.

In addition there are brief reports on:

- (1) Agriculture extension
- (2) Educational programs for farm women and girls
- (3) The National Farm Radio Forum
- (4) Training for employment on farms.

This section is followed by detailed reports of programs in each province.

The programs of education in agriculture in effect in each province are reported under three main headings:

- (1) Diploma courses in agriculture
- (2) Agriculture education in high schools
- (3) Short courses, study groups and clubs.

The diploma courses in agriculture include those provided in Schools of Agriculture established specifically to provide vocational training for farming as well as those conducted in association with degree courses.

Reports on agriculture education in high schools cover all courses or subjects offering specific education in agriculture whether the objective is general education, exploratory, pre-vocational or vocational. Indeed, it is frequently difficult to distinguish between these objectives or to apply uniform definitions acceptable to the authorities concerned.

Agricultural short courses include planned programs in instruction directed towards farmers or prospective farmers where the subject matter has to do primarily with agricultural production practices and related problems. The basis of operation vary from full-time programs conducted over several months to once-a-week night classes. The term "short course" is commonly used in agricultural extension work to denote a program of agricultural topics scheduled over a period of from three hours to three days or one week. Since the topics may be only indirectly related and because the audiences may attend on a "coming and going" basis, it is frequently impossible to make exact distinctions between training and extension programs.

Similarly, study groups and clubs generally include social and community activities in their programs. A club may not be registered with provincial authorities or its membership may not be confined to farm people. However, this report covers major organizations whose activities are primarily related to improvement in agricultural practice and rural living.

The Appendices include:

- (1) The need for improved vocational education in agriculture
- (2) Objectives of the schools of agriculture in Alberta
- (3) List of suggested home farm projects - Ontario
- (4) Extracts from 4H Beef Calf Club Regulations - Alberta
- (5) Extracts from 4H Club Brochure - Nova Scotia
- (6) Summary - Enrolment in 4H Clubs in Canada
- (7) Sample Program - Night School Classes - B.C.
- (8) Trends toward farm business management studies
- (9) Vertical integration and contract farming
- (10) Sample student timetables - Diploma courses

S U M M A R Y

GENERAL FINDINGS

Vocational education in agriculture possesses a number of unique characteristics which must be given special recognition by those charged with establishing training programs in this field if their efforts are to be successful. These include the following distinctive features:

(1) Whereas other vocational training programs are generally directed towards the preparation of students to secure employment as paid workers, most vocational training in agriculture at the present time is directed towards students who are or will become farm operators, even though some of those who receive the training continue as paid or unpaid farm workers for a time, while others enter other occupations.

(2) It is relatively simple to demonstrate and to measure progress towards acquisition of skills and qualifications to meet employment standards in most vocations but it is quite impossible to make comparable measurements of progress towards inculcating business acumen and sharpening the profit-making abilities of students who may not become established in the business of farming until several years after the training has been received and, even then, may not have control of some of the most critical factors for successful operation of their business enterprises.

(3) Youths entering training for most vocations typically have little or no competence in the field of training to be undertaken but many of the students enrolling in agriculture courses with avowed and legitimate intentions of engaging in the vocation of farming have had a very considerable amount of experience and have acquired a vast amount of information, misinformation and prejudice relating to the subject matter.

Each of these characteristics poses real and distinctive problems in planning courses of study, providing facilities and selecting teaching personnel.

Those charged with formulating and conducting training programs in agriculture are confronted with three additional problems which are less apparent in other fields:

(1) Agricultural teachers are constantly challenged by the problem of maintaining contact with sources of new information and developments in the industry. A teaching load that occupies his full time will soon render even a highly trained teacher out-of-date, and out of touch with current features of farm practice about which his students (and their parents) will expect him to be entirely familiar.

(2) Curricula planners must decide the extent to which the subject matter will be directly related and restricted to the scope of farm practice in the community from which students are drawn.

(3) Almost without exception where vocational agriculture is taught the teachers are charged with conducting home farm projects and participating in agriculture extension programs. Few, if any, other teaching jobs require the instructors to make their way into local, privately-operated business places with the avowed intention of modifying and improving the practices and business procedures conducted therein. Valuable as these activities are for a number of reasons, they undoubtedly place exacting requirements on the instructors and account, in part at least, for the staffing problems so prevalent in agricultural education.

In every province of Canada, capable, conscientious and thoughtful people have studied, explored and experimented in the field of agricultural education. Everyone is aware of the dynamic nature of modern agricultural practice and of the increasing importance of the farmer's education if he is to win a fair return for his investment and labour in this highly competitive industry. Everyone is agreed that there is a place in the secondary schools for some education about agriculture as an important facet of Canadian social and industrial life; that some of the subject matter of agriculture can be employed to stimulate student interest, to illustrate studies of the natural sciences and to provide practical applications of scientific principles in chemistry and physics lessons. There has been little agreement, however, on the extent to which specific training for the vocation of farming should be provided in high schools. Some considerable uniformity does exist in the general pattern of vocational agriculture courses whether associated with faculties of agriculture at universities or established in separate vocational institutions. But nowhere has there been proven success in terms of attracting numbers of students commensurate with requirements to provide normal replacements of present-day farmers in the years ahead.

It is probably inevitable that many of those who are prepared to risk their own capital and labour in the pursuit of profits in the business of farming will not have specific training in this vocation. It is also true that the persistent and widely publicized complaints by practicing farmers to the effect that their life is hard and their businesses unprofitable are noted by and do discourage many intelligent farm young people from preparing themselves for careers as farmers. Nevertheless, no thinking person can accept the possibility that the good agricultural lands of Canada will not be farmed in the next and future generations. All are agreed that the current trends towards more highly capitalized, complex and competitive farm operations place increasing importance on a high standard of education for those who are going to be the farmers of tomorrow.

Provincial Departments of Education and Agriculture across Canada with considerable financial assistance from the Federal Government in some instances, as well as universities, colleges, farm organizations and commercial firms have established diploma courses and high school programs; promoted and assisted short courses, study groups and clubs; and sponsored a wide variety of agricultural extension services in a direct attempt to provide the information and training that farmers and future farmers require if they are to secure the greatest possible benefits from the devotion of their time and talents to the agricultural industry.

The following table gives the number of farms, the total farm population, and the farm labour force 14 years and over according to the 1956 census and 1956 labour force (D.B.S.), together with enrolments for 1958-59.

Prov.	No. of Farms	Total Farm Population	Farm Labour Force 14 yrs. and over	Enrolments, 1958-59		
				Diploma	High School	Short Courses
Nfld.	2,080	10,000	4,000	-	-	105
N.S.	21,000	95,000)		35	-	568
P.E.I.	9,000	43,000)	45,000	-	-	29
N.B.	22,000	125,000)		127	-	-
Que.	122,000	740,000	171,000	1,184	-	1,313
Ont.	140,000	632,000	222,000	398	-	1,218
Man.	50,000	202,000)		49	-	9,779
Sask.	103,000	361,000)	345,000	88	73	4,395
Alta.	79,000	327,000)		235	451	2,132
B.C.	25,000	95,000	25,000	8	904	732

Note: Short course enrolments do not include study group and club activities.

DIPLOMA COURSES IN AGRICULTURE

Diploma courses in vocational agriculture are offered in eight provinces of Canada. The general pattern of these courses is as follows:

- (1) Basic course of two winter terms.*
- (2) Duration: last part of October to first part of April.
- (3) Objectives: (a) Specific study of the practices and theory of agricultural production,
(b) Training for rural citizenship.

*The Course at one of the schools in New Brunswick requires three years to graduate. The Schools of Agriculture in Alberta provide a "Two-in-One" Course whereby students having Grade XI or higher standing may graduate in one winter term.

- (4) Entrance requirements: Age 16 to 18 years; Grade VII to X.**
- (5) Directed toward rural youth with extensive farm background.
- (6) Subject matter:*** Animal Sciences,
Plant Sciences,
Farm Mechanics,
General.
- (7) Instructors hold B.Sc. or higher degrees in agriculture but teacher training is only incidental.
- (8) Older students are encouraged to enrol even if some concessions must be made in academic standing.

Table 1 indicates essential features of diploma courses in agriculture currently in operation across Canada.

Associate Courses versus Separate Vocational Schools

In four provinces the diploma courses are conducted in association with degree courses in agriculture and the staff and facilities serve both student bodies. In two provinces the diploma courses are provided at schools or colleges not offering degree courses although other vocational or academic work is commonly available. Two other provinces have both types of arrangements.

In the associated courses there is, typically, greater subject matter specialization in staff and more extensive variety in classroom and practical laboratory facilities. Students and staff have the advantage of more intimate contact with research projects and developments. Care must be exercised, however, to prevent undesirable distinctions being made between diploma and degree students while at the same time basic differences in purposes and academic backgrounds of students must be recognized.

Where vocational courses in agriculture are not associated with degree courses the laboratory facilities and demonstration material available for instruction purposes is typically not so extensive. Indeed, in some

**In Quebec there is a break in the regular school system at the end of Grade VII; students from this grade are admitted to the Agriculture Schools.

***For purposes of this survey, the content of the various courses was considered under four main subjects, to permit comparison in terms of the allocation of class time. Plant Sciences includes Field Husbandry, Soils, Horticulture, Botany and Entomology; Animal Sciences includes Livestock, Poultry, Dairying and Veterinary Science; Farm Mechanics includes Farm Machinery, Engines and Motors, Electricity, Farm Buildings and Shop Work. The General classification includes Farm Management, academic subjects such as English, Arithmetic and Science and subjects relating to Rural Sociology and Citizenship. In recent years there has been a very definite trend towards more emphasis on Farm Management.

instances the schools are entirely dependent on home farm projects and tours of neighbouring farms for practical exercises and observance of recommended farming practices. Obviously, expenditures for staff and facilities must be related to the number of students receiving training. Where student enrolments are large and where the schools provide a number of other farm services throughout the year, more specialization in staff and facilities can be justified.

Local Variations

At the University of British Columbia students in the "Occupational Farming" course do not form a distinct student body but simply "sit in" with degree course students for such classes as they may select.

At the Kemptville Agricultural School in Ontario an "Advanced Diploma Course in Farm Mechanics" provides an opportunity for graduates from the two-year diploma course to attend for a third year during which they receive advanced training in this popular field of specialization.

The "Associated Course" at the Ontario Agriculture College provides a choice of programs whereby students may take either the General or Horticulture patterns.

The course at the University of Manitoba has been re-designed recently to provide increased emphasis on Farm Management and Marketing. Students will spend considerable class time visiting, observing and receiving instruction at commercial centres, grading stations, and processing plants. Home farm projects and special reports on farm applications of classroom studies will require a relatively large amount of individual attention by staff members.

Wide variations exist, even within some provinces, as to regulations, costs, organizations and names of subjects, etc.

Enrolment

Enrolment figures indicate a remarkable similarity of trends over the last 15 years. Following the immediate post-war surge, enrolments continued at a reasonably high level for some years, then sharply declined to a low point about 1957-58. Generally, enrolments for 1958-59 show considerable increases. Officials believe that off-farm employment opportunities attracted many prospective students during the "boom" years of 1954-47 but that when high-pay jobs were not so readily available to farm youths in 1958 larger numbers decided to enrol for training in agriculture.

Table 1. Diploma Courses in Agriculture

	BRITISH COLUMBIA	ALBERTA	SASKATCHEWAN	MANITOBA	ONTARIO	QUEBEC	NEW BRUNSWICK	NOVA SCOTIA
Location	Vancouver	Olds Vermilion Fairview (temporarily closed 1958-59)	Saskatoon	Winnipeg	Guelph Kemptville Ridgetown	Ste Anne de la Pocatiere Ste Anne de Bellevue 12 other rural centres	Fredericton Woodstock St. Joseph St. Basile	Truro
Associated with Degree Course, or at Separate Vocational Schools	Assoc'td	Separate	Assoc'td	Assoc'td	One Assoc'td Two Separate	Two Assoc'td 12 Separate	Separate	Assoc'td
Related Courses at same Centres	--	Home Economics	--	--	Home Economics at Guelph and Kempt- ville Advance Diploma in Farm Mechanics at Kemptville	Home Economics at 8 centres (in summer months)	Home Economics and Com- mercial at Woodstock Academic at St. Joseph & St. Basile	--
Entrance Require- ments, Grade & Age	Not specified (selection)	IX, 17	IX, 17	Not specified (selection)	Guelph-X, 18 Kemptville- X, 16 Ridgetown-16	VII, 16	VIII, 16	X, 16
Enrolment: 1948-49 1953-54 1958-59	8	259 300 235	200 133 88	80 82 49	163 288 398	1205 1122 1184	157 130 127	36 30 35
Shop & Labor- atory Facilities	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive at two,	Some	Extensive

Table I. (cont'd.)

	B.C.	Alta.	Sask.	Man.	Ont.	Que.	N.B.	N.S.
School Farm Facilities	Extensive	Extensive	Extensive	Extensive	Extensive	Extensive at two, some at others	Extensive at one; limited at two, none at one	Extensive
Home Farm Projects	Not required	Not required	Required	Required	Required at two	Not required	Required at three	Not required
Subject Matter Allotment (Per cent):								
Plant Sciences	Varies according to choice	22	22	15	30 - 50	20	30 - 40	32
Animal Sciences		22	22	10	10 - 30	20	15 - 20	23
Farm Mechanics		22	28	20	15	20	20 - 30	10
General		34	28	55	25	40	15 - 25	35
Residential Accommodation	no	yes	yes	no	yes	yes	yes at two	yes
Costs: Room & Board	--	\$40 a month	\$61 a month	--	\$8 - \$10 a week	\$30 a month (12.50 a wk. at Macdonald College)	\$10 a wk.	\$13 a wk.
Tuition & Materials	\$156	\$65	\$150	\$167	Guelph \$145 Others \$75	\$10 - \$20	\$15 - \$25	\$23
Available Grants	--	--	--	Up to \$500 a term	--	\$15 a month	\$10 a wk.	\$1.00 a day
Total Value of Scholarships & Bursaries	--	\$3,000	\$9,500	\$4,800	\$10,700	\$875 (Macdonald College)	--	\$900
Accreditation:								
Towards High School Diploma	none	some	some	none	none	none	none	none
Towards Degree Course	some	none	some	none	some	none	none	some

Student Grants and Bursaries

Students' costs for training in vocational agriculture as well as bursaries and grants available to defray these costs vary widely between different provinces and, in some instances, between different schools in the same province. Generous grants and bursaries are available at some institutions but frequently these are awarded on the basis of means and consequently rely heavily on individual interpretations and standards as to "need".

Residential Accommodation

Residential accommodation for students is quite generally recognized as highly desirable. In addition to solving problems respecting lodgings for rural young people who cannot commute from their homes, the residences serve as laboratories in social relations. Extensive programs of extra curricula activities provide experience in organization and leadership which are universally recognized as an important objective in training programs for rural young people. In spite of the additional responsibilities relating to supervision of these activities and the problem of special qualifications required of staff members, the opinion of officials, students, parents and instructors is unanimous in placing a high value on the benefits of residential accommodation.

Special Problems in Farm Mechanics Instruction

Delineation of subject matter and procurement of adequately qualified staff for instruction in the Farm Mechanics Division appear to present the most difficult problems in the whole field of agriculture education. Increasing emphasis on mechanization, widespread availability of electric power and the large part of farm capitalization devoted to machinery and buildings demand an important place for this subject in any training program for farmers. Nevertheless, relatively few instructors with professional training in agriculture are capable of teaching in this field where they are required to demonstrate skills and knowledge closely allied to a number of trades. Frequently, tradesmen or shop teachers without professional training or experience in agriculture are engaged to provide the instruction in farm mechanics.

There are widespread differences in opinions as to the proper objectives and scope of the training that should be included. Truly, a problem does exist in distinguishing between the crafts that should be reserved for the tradesman and those that constitute the legitimate skills of the capable farmer. All are agreed that woodshop classes working on furniture-making projects and mechanics classes dismantling an antiquated engine are quite inadequate in meeting the requirements in this field but the problem of providing the special facilities, equipment and staff to enable the kind of instruction practicing farmers expect their sons to receive is not being solved at many of the training centres.

Home Farm Projects

Home farm projects are required even by some of the courses where extensive school farm facilities are available. Apart from their value in the application of principles studied in class, some school authorities consider that they serve an excellent purpose in establishing contact between instructors and parents. They credit this contact with encouraging a large percentage of students to return for the second year of the course and with providing staff members with desirable information about students' home environments. Other schools and colleges do not require such projects, principally because of the expense involved in supervision where considerable distances are involved.

Staff Requirements and Remuneration

Quite generally instructors at both the courses associated with degree work and those at separate vocational schools have an intimate contact with the farming industry through participation in extension programs and in a variety of services offered to the farming public. At the Ontario Schools of Agriculture these services as well as considerable association with the experimental programs of the Ontario Agricultural College are developed to the extent that teaching comprises a relatively small part of the work load of many of the staff members. At the Schools of Agriculture in rural Quebec the agriculture teachers typically devote only 50 per cent of their time to teaching even during the winter months. The balance of their work load consists of services as Agronomes for the surrounding area. In Alberta, a considerable number of staff personnel transfer to agriculture extension activities for the summer months and in New Brunswick most of the instructors hold major positions in the Department of Agriculture and report for teaching duties only as scheduled.

Where vocational agriculture is offered as an associate course, instructors' salaries are integrated with the regular schedules of the university or college. In separate vocational schools salaries are generally comparable to those of District Agriculturists in extension work. Where competition for the services of a prospective employee with most desirable personal and professional qualifications occurs, the Extension service typically wins out because:

- (a) Young men who graduate in agriculture are not favourably inclined to teaching. If they had been they would probably have enrolled in a faculty of education.
- (b) There appears to be a greater degree of independence and self-direction in District Agriculturist work.

School of agriculture personnel believe that skilful teaching is especially necessary in their work because:

- (a) There are extreme individual differences among their students as to age, grade and background experience.

- (b) Many of the vocational agriculture students have discontinued regular schools because of lack of academic interest or ability.
- (c) Vocational training in agriculture is not a prerequisite to farming nor to any other training course. Consequently, the teachers are constantly under pressure to create interest and to "sell" the training being offered.

For these reasons those who have teacher as well as professional agriculture training feel that their teaching should command a premium in salary over regular extension work.

AGRICULTURE EDUCATION IN HIGH SCHOOLS

Curricula planning committees of the Departments of Education throughout Canada have given careful consideration to the wisdom and feasibility of including agriculture as a subject to be taught in their high schools. Three provinces have not yet undertaken to provide for it. In three other provinces agriculture has been established as an official subject in the course of studies of the regular schools but it has either been eliminated or has become inoperative, and no instruction was being provided in the 1958-59 term. In only four provinces is agriculture currently being taught (1958-59) as a recognized subject in high schools.

Some detail respecting courses offered and enrolments in agriculture in these provinces is shown in Table 2.

Further details of programs are provided under provincial headings in the following section of this report.

The General Problem

Reasons why the provision of instruction in agriculture in high school attracts repeated attention are listed by various officials as follows:

(1) Agriculture is recognized as a major industry which will occupy a large part of Canada's population.

(2) School board members, particularly in rural areas, express interest in providing training in agriculture as a practical preparation for the adult life that many rural pupils will undoubtedly live.

(3) Representatives of farm organizations demand recognition of the needs for practical education for farm young people.

(4) Educational theorists and administrators must explore every possibility of finding an alternative to strictly academic programs that will provide an acceptable avenue for the training of students who lack interest and aptitude in academic subjects. To them, and for this purpose, agriculture and other vocational courses appear to offer a happy solution.

(5) Additional grants generally made available to school boards offering diversified programs contribute further to the attractiveness of providing an agriculture course with its interest-creating subject matter and wealth of practical shop work and laboratory exercises, as an alternative to such "heavy" subjects as mathematics, sciences, and languages.

However, in fact, all these legitimate reasons for offering vocational education in agriculture to high school students have failed to attract any widespread support in terms of student enrolment. There are numerous examples of courses having been prepared, facilities established and specially qualified teachers engaged only to find that very few pupils can be persuaded to enrol for the course.

Close examination of this situation reveals the following causes:

(1) Frequently, the persons voicing the "demand" for agriculture education have been confusing idealism and reality. They have desired agriculture education not for their own but for someone else's children.

(2) Many farm young people do not aspire to be farmers. Their parents, the farming public and possibly even their teachers, consciously or otherwise, may have inculcated a determination to get away from farming.

(3) Many of the students who might be expected to be attracted to a vocational agriculture program at high school level do not have the financial resources to make establishment in the business of farming a real possibility.

(4) Any high school program that would provide sufficient time to enable more than a superficial study of the principles and practices of farming would necessitate omission of other subjects required for entrance to other professions. Consequently, parents insist on their children enrolling for the required or prerequisite subjects so that no possible professional opportunities are closed to them.

(5) There is widespread suspicion that agriculture is included in high school programs to serve as a dumping ground for non-academic and problem students.

Difficulties in Provision of Agriculture Instruction in High Schools

In addition to the above problems respecting enrolment, there are a number of specific problems related to the conduct of successful agriculture programs in high school. These include:

(1) Special facilities and equipment are required to provide demonstration exercises in this subject where so much emphasis is placed on practical work. The extensive laboratories, shops, gardens and school farms with numerous kinds and types of livestock and the assortment of buildings and equipment apparently considered essential for the teaching of agriculture at the Schools of Agriculture in Alberta and Ontario indicate the extent of this problem where the objective is to provide vocational training.

(2) Largely as an alternative to provision of these special facilities and equipment at the schools, students are required to conduct home farm projects. Practical as such exercises may be, the fact is that they are limited in variety and scope to the resources and personal persuasions of those in charge of the home farms. Similarly, inspection visits and tours of neighboring farms are subject to limits of time arrangements and such examples as may be available within range of the schools.

(3) Supervision of home farm projects and the amount of individual attention required necessitate special arrangements for and compensations to agriculture teachers.

(4) Probably the greatest problem concerns the extremely wide scope of the subject matter comprising a course in agriculture. Where enrolments are sufficiently large to justify engagement of several instructors they can be chosen with different fields of specialization but the enrolment situation in most high schools necessitates that a single teacher must be prepared to provide authoritative instruction in considerable detail ranging from livestock feeding, breeding and management through crops, soils, plant pathology and on into machinery, buildings and motor mechanics. This a much more challenging responsibility than that which confronts instructors at the vocational schools where the same subject matter is divided among several specialists in relatively restricted fields. It accounts, in large measure, for the very common experience in high schools in various provinces, where attempts to provide vocational agriculture have been closed out because "the teacher was unsatisfactory," or because the teacher quit or a suitable replacement could not be found.

Conditions of Success

It is quite apparent from a study of the enrolment figures and the record of agricultural education in high schools across Canada that it has been most successful and achieved considerable stability where:

(1) The objective is general or exploratory rather than definitely vocational.

(2) It is offered as an elective subject available to students who do not have to sacrifice enrolment in subjects required for full matriculation standing.

(3) It is made available primarily to students in one or two rather than in the whole sequence of high school grades.

(4) It is related to the teaching of other subjects such as Social Studies, Chemistry, Physics, Biology, Mechanics and Economics.

(5) Highly qualified teachers with extensive practical agriculture experience can be employed.

(6) Some special facilities such as an agriculture classroom, greenhouse, plot land and possibly a livestock project can be provided and properly maintained at the school.

	Grade IX	Grade X	Grade XI	Grade XII	Supplementary Projects
BRITISH COLUMBIA					
Stated Objective	Pre-vocational	Vocational	Vocational	Vocational	
Courses Offered	Agriculture	Agric., Mech.	Agric., Mech.	Agric., Mech.	Night Classes in Farm
Periods per Week	4	6 4	6 4	6 4	Mechanics
Enrolment					F.F.C. Clubs
1953-54	355	351 163	119 99	38 47	School Fairs
1957-58	485	220 121	116 83	72 27	Home Farm Projects
1958-59	273	231 100	119 82	69 30	
ALBERTA					
Stated Objective	Exploratory	General	Voc. Gen.	Vocational	Home Farm Projects
Periods per Week	4	4-5	8-10 4-5	10-15	
Enrolment					
1955-56	848	468	32 11	4	
1956-57	813	374	20 8	1	
1957-58	884	340	29 22	3	
1958-59	-	382	14 49	6	
SASKATCHEWAN					
Stated Objective	Vocational	Vocational	Voc. Gen.	Agric. Economics	Extensive Program of Adult
Periods per Week	4	4	8 4	8 4	Study Clubs
Enrolment					Home Farm Projects
1955-56	18	13	0 -	0 -	
1956-57	24	24	7 -	0 -	
1957-58	13	19	47 3557	13 640	
1958-59	45	16	10 -	2 -	
ONTARIO					
Courses Offered	Ag.Sc., Gen.Ag.	Ag.Sc., Gen.Ag.	Ag. Sc.,	Ag. Sc.	
Periods per Week	(2) 4-5	(2) 4-5	(2)	(2)	
Enrolment	Agriculture Science is offered in lieu of physics and chemistry in 157 schools with a total enrolment of 53,620 pupils.				
	General Agriculture is offered in 99 schools having Departments of Agriculture, with an enrolment of 10,643 pupils (1957-58).				

(1) Some parts of General Science include agriculture topics.

(2) Agriculture Science may be taken in lieu of Physics and Chemistry.

NOTE: Agriculture has been discontinued as a high school subject in Manitoba, Prince Edward Island and New Brunswick. Agriculture has not been established as a high school subject in Nova Scotia, Quebec and Newfoundland.

(7) Effective liaison is established between agriculture teachers and those employed in the field of agriculture extension work. Collaboration in planning courses of study designing home farm projects and farm club projects provides for integration of effort. The importance of such liaison and collaboration applies at both provincial and local levels.

AGRICULTURE SHORT COURSES

A wide variety of programs offering education, training and information in all fields of agriculture are being conducted across Canada. Some occupy the full time of students over a period of several months; some are conducted as evening classes meeting at regular intervals; others consist merely of a series of more or less unrelated topics programmed over a one-day period. Examples of special types of courses include:

- (1) The five-months Farm Mechanics Short Course at the Institute of Technology, Calgary, Alberta.
- (2) The Fur Farm Operators Course conducted on a apprenticeship basis in Newfoundland.
- (3) The Rural Community Night Schools in Ontario.
- (4) The Itinerant Farm Welding Schools in Alberta.
- (5) The Adult Study Classes conducted by the vocational agriculture teachers in Saskatchewan.
- (6) The Youth Training Course at the University of British Columbia.
- (7) The series of courses at Brandon, Manitoba.
- (8) The Folk Schools in Nova Scotia.

Distinct trends widely reported by provincial officials engaged in this work include:

- (1) Specialized subject matter rather than general or variety programs.
- (2) Greater employment of study group, workshop, and panel discussion techniques.
- (3) Greater interest and attendance by farmers in the younger age groups.
- (4) More evening or "after hours" meetings in recognition of the greater degree of employment of farmers during the day.
- (5) An increasing demand for farm management studies.

Further details of some of the short course programs are outlined under provincial headings in a later section of this report.

THE 4-H CLUB MOVEMENT

Probably the broadest program of specifically vocational agriculture training in effect across Canada is that conducted by the 4-H Club organization. Several agriculturists in an excellent position to appraise this program credit it as being most effective in its total impact on the general trend and progress of farm production practices and rural living standards.

The 4-H Club movement in Canada is a nation-wide program for rural young people up to the age of twenty-one. While the movement was not organized at the national level until 1931, the earliest clubs date back to the period from 1910 - 1915. Membership since that time has grown steadily to a high of 73,881 in 5,118 clubs in 1958.

An early phase in the development of this movement saw Boys and Girls Farm Clubs employed deliberately and simply as a media for the introduction of some recommended crop variety or livestock breeding program but in due course greater emphasis was given to the human elements so that primary attention shifted from pigs and calves and crops to boys and girls and their homes. Club activities continue to centre on specialized projects in keeping with the motto, "Learn to Do by Doing" but increasing emphasis is being given to broader aspects of agricultural practice and rural citizenship.

About one-half of the 4-H Clubs in Canada are composed only of girls conducting Home Economics projects. The remainder generally permit girls to be members but consist mostly of boys and conduct agricultural projects in livestock, crops or machinery.

The average age of club members is 14.1 years and there were an average of 14.5 members per club in 1958.

Except in Newfoundland where it is directed by the Adult Education Branch of the Department of Education and in Saskatchewan, by the University Department of Extension, 4-H Club work is directed by Provincial Departments of Agriculture. Supervision at the local level is done by district agriculturists and home economists who generally depend to a considerable extent on assistance by voluntary leaders and local organizations.

Membership in 4-H Clubs conducting agricultural projects in recent years have been:

	<u>No. of Clubs</u>	<u>No. of Members</u>
1948	2,135	30,505
1953	2,211	36,932
1958	2,545	42,085

The 4-H Program

4-H Clubs in Canada hold, on average, 7 to 9 meetings a year. Programs are planned to permit a maximum of participation of each club member. In so doing, 4-H members acquire valuable training in parliamentary procedure and self-expression through:

- Conducting club meetings,
- Public speaking competitions,
- Team demonstrations at fairs and conferences,
- Giving reasons at 4-H judging competitions.

Broad educational features of local 4-H club programs include: tours to industrial plants, experimental farms, capital cities, agricultural colleges, inter-club 4-H rallies and exchange visits with 4-H members of other countries.

In all phases of the 4-H program, records of participation are kept including:

- Meeting attendance,
- Record books,
- Executive positions held,
- Care of club projects,
- Standing at achievement day,
- Participation in church and community activities.

The Canadian Council on 4-H Clubs

The Canadian Council on 4-H Clubs is the national organization through which the 4-H Club program in Canada is co-ordinated. The Council, with headquarters in Ottawa, became incorporated in 1933 and is maintained through the interest and financial support of the Federal and Provincial Departments of Agriculture, thirty-six business companies and twelve national agricultural associations. Total disbursements of the Council in the interests of club work amounted to over \$38,000 in 1958.

Junior Farmers' Clubs

These clubs which are attracting considerable membership in Ontario serve as a continuing organization for "graduates" of 4-H Club work but membership is not restricted to those with 4-H Club experience. Individual clubs are more autonomous and more attention is devoted to fellowship and social activities. However, programs usually include educational topics and close liaison is maintained with the Agricultural Representatives.

Membership in the Junior Farmers' Association is open to all rural young people, boys or girls, up to 30 years of age. Provincial organization includes local clubs, County Associations and a Provincial Executive.

FUTURE FARMERS OF CANADA (F.F.C.) CLUBS

These clubs patterned after the "F.F.A." clubs in the United States have been organized recently in British Columbia as an extra-curricular activity related to the teaching of vocational agriculture in High Schools. Membership is not restricted to vocational agriculture classes nor to high school students. The program of projects and associated activities is very similar to those of 4-H Clubs and, indeed, raises some question as to the duplication involved in introducing this organization when the established system of 4-H Clubs appears to possess ample flexibility to provide for any special purposes or program that agriculture teachers may wish to include for their students.

AGRICULTURE EXTENSION PROGRAMS

Those engaged in farming occupy a rather unique position in regard to the extent of attention given to them in the form of information, services, and assistance policies directed towards improvement in the operation of their business enterprises and amelioration of their living conditions.

Provincial Departments of Agriculture, quite generally, have Extension Service Branches, employ district agriculturists located in agricultural areas and have subject matter specialists at headquarters. Special grants and funds are appropriated annually to encourage use of improved breeding stock and other farming practices. Many inspection, planning and laboratory services provide technical assistance and information free or at nominal cost.

The Federal Department of Agriculture and university faculties of agriculture in addition to conducting research projects in all phases of the farming industry provide professionally trained agriculturists to participate in short-course programs, field days, agricultural shows and demonstrations. Very considerable contributions are made to prize lists and facilities are made available for holding agricultural fairs, livestock shows, and sales. Authoritative and up-to-date bulletins and pamphlets on a wide variety of agricultural topics are furnished without charge to the farming public while newspapers, magazines, radio and television stations all devote considerable space or time to agricultural topics.

Farm organizations, co-operatives and numerous commercial companies providing services to the farming public are employing an increasing number of trained agriculturists who provide considerable technical information to their farmer customers in the course of business transactions. The net result of the contributions of all these agencies amounts to a very considerable amount of education -- informal, incidental and unorganized as it is. Because of its volume and the numbers of persons affected, the gross impact has probably more effect on present-day agricultural practice throughout Canada than the sum total of organized training programs and formal agricultural courses.

Examples of some of these extension activities are outlined under provincial headings in a following section of this report.

Study Groups

With increasing recognition in recent years of the importance of farm business management, agricultural extension services have given particular attention to encouraging the formation of study clubs whereby an organized program of instruction, discussion and study can be conducted with groups of farm people desiring information and practice in accounting and analyzing the business aspects of their farming enterprises. Alberta, Saskatchewan, Manitoba, Ontario and Quebec currently have programs in operation. They are variously known as Farm Management Associations, Farm and Home Improvement Clubs, and Adult Farmers' Study Clubs.

Some programs are outlined to extend over three or four years during which time weekly or monthly evening sessions, mostly in the winter, will be held. Problems in accounting and income tax reporting typically occupy early parts of the programs but more involved studies of analyses and budgeting soon develop.

District agriculturists and subject matter specialists from faculties of agriculture and the Division of Economics of the Federal Department of Agriculture have been providing guidance and instruction but it is becoming quite apparent that specially trained personnel and considerable research work is going to be required to meet the demands of these groups.

EDUCATIONAL PROGRAMS AND SERVICES AVAILABLE TO FARM WOMEN AND GIRLS

Except at the rural schools in the Province of Quebec where enrolments continue to expand, diploma courses in homemaking are attracting decreasing numbers of rural young women and have been discontinued or are approaching this event at several centres. Expanding programs in home economics in high schools and the demand for more specific employment training are quoted in explanation of this development.

The Homemaking Courses in Quebec

In 1958 nine schools of agriculture offered farm housekeeping courses to girls from country districts. 460 pupils were enrolled, 86 per cent of whom were farmers' daughters. The course consists of two summer terms of four months each given from June to September. Because the success of these courses is increasing from year to year, the Department hopes to provide each of its 16 schools with a Farm Housekeeping section as soon as conditions are suitable.

As in the case of the boys, the Department of Agriculture gives bursaries of \$15.00 a month to girls from Quebec and half that amount to girls from other provinces. The Department also pays the teachers' salaries and provides for the purchase of equipment and materials needed for the proper functioning of the courses.

The Agriculture Schools Division also co-operates with a few other institutions who are maintaining courses clearly directed towards the needs of rural families. These are the Superior Domestic Science School, the Ormstown School Board and the Macamic Farm Housekeeping School.

Home Economics Course at the Carleton County Vocational School, Woodstock, New Brunswick

This one-year course is designed primarily for the training of future homemakers. Although homemaking is most frequently a lifetime career, statistics show that a relatively small percentage of Canadian women have had any special training in this field. The Carleton County Vocational School offers an intensive course in the arts and skills of homemaking.

The Home Economics Department, recently renovated, is arranged to resemble a home as nearly as possible. Facilities include well-equipped modern kitchen units, laundry, sewing room, bedroom and beauty-care equipment.

The living room, decorated in a simplified modern theme, is a centre for afternoon teas and other special functions.

The course in home economics comprises a study of the following subjects:

Food and Cooking	English and Composition
Nutrition	Correspondence
Clothing and Textiles	Arithmetic and Bookkeeping
Beauty Care	Penmanship
Home Management	Spelling
Laundry	Self Improvement
Home Nursing and Child Care	Courtesy

Students taking the home economics course provide themselves with various fabrics as required for work in the sewing class, also small equipment such as scissors, pins, needles, thimble, etc. A student will make an average of six garments during the year, the cost varying with the type of fabric chosen. The use of inexpensive cottons and wash fabrics is stressed. \$20.00 to \$30.00 adequately covers the price of fabrics used, and this cost is more than offset by the value of the finished garments.

Home Economics Diploma Courses in Alberta

These courses have been offered along with courses in vocational agriculture at the Schools of Agriculture since 1913. The basic course comprises two five-month winter terms. Entrance requirements at present are Grade IX standing and 16 years of age.

Girls with Grade XI or better standing are eligible to enter a "Two-in-One" Course in which most academic subjects are omitted and work is centered on the basic homemaking subjects so that graduation can be achieved in one winter term.

Subjects include Foods, Clothing, Home Management, Laundering, Handicrafts, Typing, Bookkeeping, Public Speaking, Horticulture, Dairying and Poultry.

Although the basic aim is training for homemaking some commercial work and guidance in employment training is included to assist girls in securing immediate post-school employment.

Costs include \$40.00 per month for room and board and about \$65.00 for fees, classroom materials and uniforms.

Total enrolment figures for recent years are as follows:

1948-49	-	132
1953-54	-	94
1958-59	-	37

Home Economics Diploma Courses in Ontario

Courses similar to those in Alberta are offered at the Macdonald Institute in Guelph and at the School of Agriculture in Kemptville.

Enrolment remains at capacity at Guelph but has declined to between 10 and 20 at Kemptville.

Instructors at Guelph give the social attractions of the campus life there considerable credit for enrolment levels but express definite preferences for instruction duties with degree course students who display greater interest and ambition in their work and studies.

Vocational Agriculture Programs

Girls are accepted for enrolment in most diploma courses in vocational agriculture but school authorities generally attempt to persuade prospective students to enrol in the homemakers' course. Typically, one, two or three girls enter some agriculture courses each year and do reasonably good work.

4-H Club Work

Most 4-H Club projects in agriculture are open to girls as well as boys and quite generally the girls give a good account of themselves frequently winning championships and national honors. The recent trend, however, is for more home economics projects to be organized for the girls.

1958 figures are as follows:

Members in Home Economics Clubs (Girls)	31,796
Members in Agriculture Clubs (Girls)	6,271
" " " " (Boys)	<u>35,814</u>
	73,881

Study Groups and Clubs

With the relatively recent emphasis on giving attention to the whole farm family and to farm business management in agriculture extension programs, women are assuming a more important role in agricultural short courses and study groups. Farmers' wives are accepting invitations to attend meetings and group discussions with their husbands and are taking an increasingly important part in accounting and budgeting studies because many of them "keep the books" in the farm business.

Poultry, gardening and dairying which have held the most important interests for farm women are becoming of less importance to them as specialty farming and large-scale operation enter these enterprises.

Services of Home Economists

Most agriculture extension branches provide the services of professionally trained district home economists located either in rural areas or at provincial offices to assist farm women with various problems and items of information pertaining to their work as rural homemakers.

Major activities of the district home economists include the organization, supervision and instruction of 4-H Home Economics Clubs; collaboration with Women's Institutes and Agricultural Societies or Federations in planning and conducting women's programs: giving lectures and demonstrations relating to meal planning, clothing and household equipment.

Along with district agriculturists they frequently form a team to organize, conduct and lead in discussion study groups studying farm and home improvement programs.

THE NATIONAL FARM RADIO FORUM

This project is sponsored jointly by the Canadian Broadcasting Corporation, the Canadian Federation of Agriculture, and the Canadian Association for Adult Education. It has a national secretary and various provincial secretaries. The project is built around a weekly national broadcast of a panel discussion of farm problems. Members of local forums meet together to hear the broadcast, discuss issues relative to the broadcast topic and report opinions or views to the central organization.

The number of organized local groups for the 1956-57 season was:

British Columbia	6	Quebec	50
Alberta	36	Nova Scotia	136
Saskatchewan	132	New Brunswick	30
Manitoba	24	Prince Edward Island	34
Ontario	415	Total	863

The Canadian Federation of Agriculture contributes \$8,000 annually to the support of the national office and staff and most Provincial Federations are sponsors at the provincial level.

TRAINING FOR EMPLOYMENT ON FARMS

Although vocational education in agriculture in Canada is confined almost wholly to the training of operators or future operators of farm businesses, particular attention was given in the course of this survey to any programs in effect or any proposals being made respecting the training of prospective farm employees.

In several European countries systems of training for employment by farmers have been in operation for many years. They are based on a combination of vocational school attendance and apprenticeship training on approved farms.

Although some widespread demand for farm employees holding recognizable certificates as dairymen, tractormen, poultrymen, or farm managers has been expressed, no programs to provide such training have been established and authorities are generally skeptical as to the possible

response either in terms of numbers of trainees who would be attracted or the number of farmers who would give any real preference in hiring or pay any appreciable premium in terms of wages for hired men holding certificates of qualifications in these various skills.

In Newfoundland, a training scheme for fur farm operators or employees has been in effect and is credited with having served the purposes desired by the government at a time when it was definitely interested in sponsoring development of fur farming as a new industry there. This scheme operated on a short-course and apprenticeship basis with a government grant of \$100.00 per month being paid to each trainee. Usually, the employer with whom trainees were apprenticed paid nothing for their services.

Several short courses of 2 - 4 weeks, offering training in egg and poultry grading have attracted good enrolments. Although many of the trainees were encouraged to attend by employers operating commercial grading and buying stations, others were operators or employees of poultry specialty farms.

With the current development of more contract farming and various types of integration between farmer, hatcheryman, feed suppliers and others with the resultant large scale and highly specialized production, certain new factors may soon create a real demand for specific training in the poultry industry and similar developments could follow in other branches of agricultural production.

AGRICULTURAL TRAINING PROGRAMS IN THE PROVINCES

NEWFOUNDLAND

Diploma Courses in Vocational Agriculture

No courses of this kind are offered in Newfoundland. However, for students who are interested in either vocational or professional training at the Nova Scotia Agricultural College, the provincial government will provide financial assistance to cover full cost of transportation (one return fare), board and room and laundry as well as class fees, books and supplies. This assistance has amounted to between \$500.00 and \$600.00 per student in recent years.

Students who benefit under this policy are subject to investigation and report by a selection committee and are required to make satisfactory progress in the course of training. The number is limited to a maximum of six in any one year but applications for assistance have not reached this limit in recent years. Since 1938 a total of 62 students have received assistance and an additional 12 students have taken agricultural training independently of government financial assistance -- approximately 25 per cent in the degree course and 75 per cent in the vocational course. On completion of their course the great majority of students find employment with either the Federal or provincial governments, typically in work relating to their training. Only eight out of the total of 74 Newfoundland students who received training in agriculture during the last 20 years are currently directly engaged in farming in Newfoundland.

Agriculture Education in High Schools

Agriculture is not included as a subject in the curricula of Newfoundland high schools. There is, however, incidental reference to agriculture as an industry and to some of its subject matter in the regular course content of such subjects as social studies, mathematics, chemistry, etc.

Short Courses, Study Groups and Clubs

Under supervision and assistance by the provincial Department of Resources and with assistance from personnel of the Federal Department of Agriculture, a number of short courses for farmers have been offered in recent years as follows:

(1) Eight-Week Short Course for Farmers

Three evening sessions were held each week at which lectures and demonstrations on various topics relating to agricultural production were given to an average attendance of 45 to 50 farmers.

(2) A One-Week Farmers' Short Course was held in 1958 at the Dominion Experimental Farm. Sixty to seventy farmers were in attendance. The province paid travelling expenses and board and room costs for selected delegates from various communities.

(3) One-day Short Courses at Regional Illustration Stations are also held each year with the Province paying travelling expenses, board and room costs for selected delegates from various communities.

(4) A Two-Year Apprenticeship Course for Mink Ranch employees operated over the period 1955-1958. Sixty young men began this course of training and 25 of them completed it. Evening lessons on pertinent topics were given each year from January 15th to April 30th by a qualified veterinarian specially experienced in mink farming. The provincial department paid these apprentices \$100 per month during their period of training. Eighteen of those who took this training were actively engaged in mink ranching during the winter of 1958-59.

This scheme was considered generally successful in developing a supply of local labour with experience and know-how in handling mink but because of market conditions and production problems it was discontinued in 1958.

(5) Egg Graders' Courses of two to three weeks duration attracted trainees from both producers' farms and commercial grading stations in each of the two years they were offered.

4-H Clubs in Newfoundland are organized under supervision of the Adult Education Division but receive assistance from the Agriculture Division in subject matter details relating to projects in Forestry and Garden Clubs.

Extension Services and Agricultural Improvement Policies

Some indication of the scope of Extension Services and Agricultural Improvement Policies available to Newfoundland farmers is given by the following data taken from the 1958 Annual Report of the Director of the Agricultural Division:

(1) Agricultural education and extension work employs 13 fieldmen who interpret Departmental policies, administer development projects and provide a day-to-day service to farmers in practical and technical problems associated with farm productions and marketing.

(2) Land development and improvement grants up to \$125.00 per acre are available to farmers who wish to clear land for expansion of existing farms or development of new ones.

(3) Agricultural limestone, ground and bagged is supplied to farmers at \$2.00 per ton in carload lots at their nearest railway station. 13,363 tons were supplied under this policy during the period 1953-57.

(4) Organizational encouragement and program assistance are given to the following farmers' organizations:

55 Agricultural Societies,	2 Poultrymen's Associations,
33 Sheep Producers' Organizations,	3 Farmers' Marketing Associations

(5) Prize list grants, judging services, etc., were provided to a Provincial Agricultural Fair and nine District Fairs.

(6) Twenty-two Sheep Fairs were held at which bonuses of \$1.00 each were paid on 484 selected and tagged ewe lambs and \$4.00 bonuses on 416 selected and re-graded yearling ewes.

(7) A bonus of \$200.00 each was paid on 67 bulls approved under a Bull Bonus policy and up to \$40.00 each on transportation costs of 168 dairy cows.

(8) A farm financing policy provides loans up to 70 per cent of appraised values of farms and buildings at $3\frac{1}{2}$ per cent interest re-payable over a five-year period.

PRINCE EDWARD ISLAND

Diploma Courses in Vocational Agriculture

No vocational courses in agriculture are offered in Prince Edward Island.

It should be noted, however, that students from Prince Edward Island who wish to attend the courses offered at the Nova Scotia Agricultural College, Truro, are eligible to receive a grant of \$1.00 per day which amounts to approximately \$150.00 per year towards their room and board.

Further, students interested in enrolment for degree courses in agriculture may take the first two years work either at Prince of Wales College, Charlottetown, or at the Nova Scotia Agricultural College, Truro. Through affiliation arrangements such students may complete their degree work at Macdonald College, Quebec. Five students at Prince of Wales College and three at Nova Scotia Agricultural College were enrolled in these agriculture courses for the 1958-59 term.

Agriculture Education in High Schools

Although agriculture was included as a subject in the public school curriculum a number of years ago, it is now replaced by natural science. Some consideration has been given to the possibilities of offering at least a science course slanted towards agriculture, if and when one- and two-room schools are consolidated so that employment of a teacher with some agriculture training could be justified.

Short Courses, Study Groups and Clubs

Except for the 4-H Clubs, detailed elsewhere in this report, there are no organized programs of vocational education in agriculture in Prince Edward Island.

The Provincial Department of Agriculture sponsored youth training courses in agriculture for several years prior to World War II, at which time some 40 students attended annually. Again, just after the war, youth training short courses for junior farmers were offered at the Provincial Vocational School in Charlottetown but enrolments decreased until in 1954 only five students attended. Since that time the course was advertised regularly but had to be cancelled each year until 1959 when some 29 young men enrolled for it.

The course was designed on a four-weeks basis with instruction to be provided principally by provincial and Federal government agriculturists. Facilities at the Dominion Experimental Farm were used for practical lessons. Grants amounting to \$9.00 per week were paid to students having to live away from home to attend this course.

Comparative figures on enrolments for courses in egg grading and farm mechanics offered on a similar basis are listed below:

<u>Year</u>	<u>Course</u>	<u>Number of Applicants</u>	<u>Enrolment</u>
1953-54	Agriculture (4 weeks)	10	5
	Farm Mechanics (6 weeks)	24	15
	Egg Grading (3 weeks)	26	20
1954-55	Agriculture	2	not held
	Farm Mechanics	16	16
	Egg Grading	3	not held
1955-56	Agriculture	2	not held
	Farm Mechanics	6	not held
	Egg Grading	31	28
1956-57	Agriculture	2	not held
	Farm Mechanics	8	not held
	Egg Grading	19	11
	Potato Roguing (1 week)	11	11
1957-58	Agriculture	4	not held
	Farm Mechanics	6	not held
	Egg Grading	24	16
1958-59	Agriculture	29	29

There is an apparent lack of demand by farmers for vocational education in agriculture for their sons. This is probably due to (a) ambition for their sons to enter other vocations (b) lack of appreciation of a need for specific training in agriculture for those who are going to farm.

Until a sufficient number of prospective students appear, any establishment of an attractive, comprehensive program and facilities for training in agriculture could not be justified.

Agricultural Extension Activities

The farming public in Prince Edward Island receives information and assistance towards agricultural improvement through a wide variety of programs provided by the Provincial and Federal Departments of Agriculture which co-operate closely in providing their services to various farm organizations and other media as indicated by the following data from the 1957 annual report of the Provincial Department of Agriculture:

District Agriculturists	3
Provincial Subject Matter Specialists	8
Dominion Experimental Farm	1
District Illustration Stations	5
Provincial Agricultural Fair	1
Regional Agricultural Fairs	5
Plowing Matches	3
Short Courses (1 afternoon & evening)	4 - 5

Farmers' Week at Charlottetown	1
Federation of Agriculture Farm Forums	
Artificial Insemination Units	13
Livestock Breed Associations	Various
4-H Clubs	132
Junior Farmers' Clubs	3
Easter Beef Show & Sale	93 animals shown
Rural Youth Fair & Harvest Exhibition	700 entries

A regular one-half hour T.V. broadcast to farmers is made each week.

In the Provincial Veterinarian's report it is stated that an increasing number of requests to attend meetings, give radio talks, television appearances and news reports were received. More than 20,000 separate reports were made from the office; 4,268 letters were written and there were 1,693 callers seeking advice.

The Dominion Experimental Farm was visited in 1957 by 62 organized groups of which approximately one half were farmers.

NOVA SCOTIA

The Diploma Course in Vocational Agriculture

A two-year diploma course in vocational agriculture is offered at the Nova Scotia Agricultural College, where the first two years of a degree course in agriculture may also be obtained. Pertinent details relative to the Farm Course are as follows:

Administration: The Provincial Department of Agriculture and Marketing.

Location: Truro. This College is in operation for its 54th year.

Objectives: Preparation for life on the farm and for citizenship in the rural community.

Duration: Two winter terms each operating from approximately October 22 to April 30.

Note: The term for Degree Course students opens about September 20.

Course of Study: Course content is determined by members of the faculty under supervision of the principal. The program of studies is designed to provide a well-balanced course in the first year with supplementary and more advanced work in the second year. There is no provision for specialization. Distribution of class time* according to subject is as follows:

	<u>Per Cent</u>
Plant Sciences	30 - 35
Animal Sciences	20 - 25
Agricultural Mechanics	10
Farm Management & General	35

Public speaking is studied through seminar presentations and discussions. Participation in Farm Forum programs is required of all students.

Facilities: The college is well equipped with a modern residence having accommodation for 124 students. Classrooms, laboratories, greenhouses, and shops provide for instruction covering the whole range of agriculture. Included is a 300-acre farm with herds of Shorthorn, Ayrshire, Guernsey and Holstein cattle as well as other livestock.

The college also provides headquarters offices for Extension Services and officials administering most of the Provincial Department of Agriculture policies. However, the college does not conduct research or experimental programs.

*See Appendix (10) for timetable with details of lecture and laboratory arrangements.

Staff: The staff provides instruction for both farm course and degree course students. Minimum qualifications are a B.Sc. degree but more than one-half hold Master's or higher degrees. The faculty numbers some 35 members most of whom participate in the instruction of students in the Farm course but other duties include extension and administrative work for the Department of Agriculture.

Student

Enrolment: Generally, enrolments in the degree course have been about double the enrolments in the farm course. A few but not a large proportion of the degree course students terminate their training at the end of the two years offered at Truro, and either engage in farming or accept other employment directly related to their training. Sample enrolment figures are as follows:

	<u>1948-49</u>	<u>1953-54</u>	<u>1957-58</u>	<u>1958-59</u>
Farm Course (1st year)	26	16	12	26
Advanced Farm Course (2nd yr.)	10	14	5	9

Current classes include eight students from other Maritime provinces, one from Central America and one from Peru. Girls are not excluded from enrolment but only one girl has attended the course in recent years.

Entrance

Requirements: Students must be 16 years of age and should possess a Grade X certificate although students with lower standing are considered for admission on personal merit. Current classes average 18 years of age, with slightly over Grade X academic standing. At least one year or its equivalent of farm experience is required. 85-90 per cent are sons of bona fide farmers.

Costs: Tuition is free to residents of Canada but foreign students are charged \$50.00. Miscellaneous fees amount to \$23.00 per year and board and room accommodation in the student residence costs \$13.00 per week, amounting to approximately \$240.00 per year. A grant towards these expenses amounting to \$1.00 per day is provided under the Federal-Provincial Youth Training Plan to students from Nova Scotia, New Brunswick and Prince Edward Island. Selected Newfoundland residents are eligible for grants covering all costs except personal expenses.

Scholarships, Bursaries and Prizes amounting to approximately \$900.00 are available to students in the two years of the farm course.

Home Projects: Were formerly required but have been discontinued because results were not deemed particularly successful.

School Farm Duty: Not required except for teaching purposes or observation of farm practices.

Student Achievement is based on term work and formal examinations. Those satisfactorily completing the work of the two years are awarded a Diploma of Graduation. No accreditation toward High School standing is given for completion of the farm course. However, should a graduate wish to enroll in the degree course, provided he has Junior Matriculation standing, he would be given credit for such agriculture subjects as have been satisfactorily covered.

Advertising and Publicity: In addition to the incidental publicity for the course arising out of association with the degree course and with the diverse activities of the central offices of the Extension and Administrative Services of the Provincial Department of Agriculture, several staff members devote some time to making direct contact with vocational guidance officers of rural schools and call on farm families with the object of encouraging enrolment.

Trends: (1) After rather sharply declining enrolments in recent years, the 1958-59 attendance has returned to former levels.

(2) More emphasis is being given to farm management, and instruction in blacksmithing is being partly replaced by welding and rural electrification.

(3) College records indicate that approximately 60 per cent of graduates from the farm course engage in farming while the majority of the remainder find employment in related fields.

Agriculture Education in High Schools

The Department of Education is giving careful consideration to the desirability of providing agricultural education in the high school programs of Nova Scotia. A Curriculum Advisory Committee on Agriculture Education has been studying the possibilities for some time. It includes representatives from the teaching profession, the Faculty of the Agricultural College, the Federation of Agriculture and the Departments of Agriculture and Education. In 1957 a committee of five persons visited Ontario to study the provisions in that province for agricultural education in high schools. Although some demand is apparent from rural school boards, there does not appear to be any acceptable solution to the problem and the Advisory Committee has not as yet formulated any recommendation.

Programs in effect in recent years are as follows:

(1) Correspondence Courses have been made available for some 20 years. These have been related to Junior Farm Club membership (now 4-H) and have provided a one-course credit (five credits constitute one year's work) towards standing in each of grades X, XI, and XII. Gradings are based partly on achievement in a regular club project and partly on examinations. With the development of consolidated schools the number of students enrolling for these correspondence courses has diminished. Numbers have been as high as 400 per year but in 1958 only 227 wrote the examinations.

(2) Agricultural Science is available as one of four science subjects from which students must select two in each of Grades IX, X, or XI. In practice, the choice is generally made by local school authorities when arranging their programs. Currently only one school is providing agricultural science in Grades IX and X. Another school is providing it in Grade XI.

(3) Agriculture is being taught in one rural high school on an experimental basis where it is now in its third year. An enthusiastic teacher whose aim is to inculcate "an appreciation of the potential advantages

of living in a rural environment and how to raise living standards through efficient farming methods" is employing facilities of a well-equipped neighboring farm and the services of various Extension staff personnel to provide subject matter detail. Current enrolment is: Grade X - 76; Grade XI - 17; Grade XII - 10. Girls as well as boys are included in these numbers. A feature of the arrangement is that students choosing to study agriculture do not have to forego any subject required for full matriculation standing.

The following questions have been formulated as a guide to future work by the Curriculum Advisory Committee:

- (1) Should the agricultural education program be the same in all schools, or should it be modified to suit local conditions?
- (2) Should there be separate agriculture courses or should the instruction be integrated with other courses?
- (3) In which grades should agriculture be taught?
- (4) What should be the purpose of agriculture education?

Short Courses, Study Groups and Clubs

A wide range of activities conducted through the Agricultural Extension Branch in association with the Nova Scotia Agricultural College and members of its faculty, provide opportunities for farmers and members of their families to receive training, instruction and information on almost any phase of farming. Some indication of the scope of these activities as recorded in the 1957 annual report of the Department of Agriculture and Marketing is shown below.

An Advisory Committee on Agricultural Services brings together officials of the Provincial and Federal Departments with a view to co-ordinating and integrating their work and policies. Generally, the work is conducted through rural leaders and farm organizations. The County Federations of Agriculture and the Women's Institutes serve a significant role in sponsoring programs and gaining participation at the local level.

Short Courses:

- (1) Four-day short courses covering a variety of agriculture topics were held at ten district points.
- (2) One- or two-day short courses in February and March were held in each County.
- (3) Six two-day short courses on farm management and accounting attracted some 500 farmers.
- (4) One one-week egg grading course and two three-day poultry meat grading courses were attended by 48 persons engaged in poultry production.

(5) Four folk schools featuring community leadership had an average attendance of 20 rural young people averaging 25 years of age. Residential accommodation was provided and the program typically included a one-hour period each day during which agriculturists led discussions on agricultural topics. These schools were jointly organized by the Department of Education and Agriculture. Costs averaged \$35.00 per student but quite commonly those attending were delegates sponsored by local Federations of Agriculture or other interested farm groups.

(6) In addition to special 4-H camps, some 400 boys and girls attended one-week camps related to Agricultural Fairs.

(7) A one-day short course was held for operators of chemical weed sprayers.

Junior Farmers' Clubs:

Three clubs with an average membership of 30-40 young men and women 18 to 25 years of age, hold meetings once a month at which district agriculturists or members of the Agricultural College faculty are frequently invited to participate in studies of pertinent agricultural subjects.

Farm Management Project:

Some 200 farm operators are engaged in detailed management studies of their farms. They hold study group meetings and short courses on farm accounting and analyses of farm businesses at which members of the College staff provide instruction.

Agricultural Extension Services

Seventeen district agriculturists with eight assistants are located in the various counties while some 45 subject matter specialists with offices at the Agricultural College devote either all or part of their efforts to agricultural improvement work in the province. Some data from the 1957 annual report indicate the scope of their work:

District Agriculturists made 21,025 individual farm calls.

There were 135 active Farm Radio Forum groups.

2590 cows were under test in the Dairy Herd Improvement Policy.

3851 soil samples were tested for farmers and remedial recommendations made.

Plowing matches attracted an attendance of 450 persons.

5380 specimens were examined and reports made in the Animal Pathology Laboratory.

17 Artificial Breeding Units are in operation for which technicians are trained.

12 Shipping Associations were successful in the 70 per cent Grade A Bacon Hog Competitions.

Agricultural Engineering Services include projects in soil moisture control, marshland reclamation, community pastures and farm buildings and planning.

Weekly radio programs on farm topics are made by the Agricultural College staff and tapes go to six radio stations.

District agriculturists and home economists have ten-minute programs daily on two radio stations and three times a week on two others.

Bonuses were paid on 82 bulls and on 88 rams under an Improved Sire Policy.

13 District and County Agricultural Exhibitions and 19 Community Fairs were held as well as the Maritime Spring Fat Stock Show and Sale, the Maritime Winter Fair and two Livestock Feeder Sales.

NEW BRUNSWICK

Diploma Courses in Agriculture Education

Four centres in New Brunswick offer vocational education in agriculture. Those at Woodstock and St. Basile are operated by County School Boards under supervision of the Department of Education while those at Fredericton and St. Joseph operate under supervision of the Agriculture Education Branch of the Provincial Department of Agriculture.

Close co-operation exists between the two departments as indicated by the fact that the principal of the Vocational School at Woodstock is also employed as district agriculturist for the Department of Agriculture in the surrounding area. Co-operation is given by the Federal Department of Agriculture in providing facilities for the school at Fredericton on the premises of the Dominion Experimental Farm.

Although no specific arrangements are in effect to insure uniformity in all details of the courses offered at the four centres, the purposes, course structures and bases of operation are quite similar.

Objectives: 1. Training for the vocation of farming.
2. Provision of a well-rounded education.

Duration: Two winter terms of approximately five months each.

In the Carleton County Vocational School a third year has been added to the regular two-year course. Only students whose work has been deemed generally quite satisfactory in the first two years are encouraged to return for the third year on successful completion of which a diploma of graduation is awarded.

At the Fredericton Agriculture School the course is set up on a two-year cycle basis so that first-year and second-year students may take classes together.

Course of Study: Largely determined by the staff under supervision of each school's principal. No specific arrangements are in effect to provide uniform curricula. However, the senior position of the course at Woodstock is recognized and the use of Department of Agriculture specialists to provide guest lectures at each of the schools tends to encourage some uniformity.

Distribution of Class Time:

<u>Subject</u>	<u>Per Cent</u>
Animal Sciences	15 - 20
Plant Sciences	30 - 40
Agriculture Mechanics	20 - 30
General	15 - 25

Facilities: The schools are operated without heavy investment in special facilities for teaching agriculture. Arrangements for practical and laboratory work vary at the different schools: at Fredericton use is made of the extensive variety of material available at the Dominion Experimental Farm; at St. Joseph, the University's farm equipment and livestock; at Woodstock, the regular shops and classrooms at the vocational school; and at Basile, the Hospital's farm.

Considerable dependence is placed on home farm projects and on tours of district farms to provide practical lessons and experience. Residential accommodation for students is available at Fredericton and St. Joseph but not at Woodstock and St. Basile.

Staff Qualifications: Principals in charge are graduates in agriculture and hold teaching certificates. Instruction in most of the agricultural subjects is given either by the principal or by subject matter specialists on the staff of the Provincial Department of Agriculture, several of whom possess incidental teaching experience. During periods when the courses are not in operation the principals typically supervise home farm projects of the students or engage in agriculture extension activities. Salaries are equivalent to those of district agriculturists.

Instruction in shop work is sometimes provided by general shop instructors or by tradesmen with considerable practical experience.

The use of itinerant or part-time instructors at Fredericton and St. Joseph necessarily requires frequent modifications in student timetables and prevents the co-ordination of staff procedures and practices that can be achieved where at least a core of instructors devotes their full attention to this type of work.

Student Enrolment:

	<u>Woodstock</u>			<u>St. Basile</u>		<u>St. Joseph</u>		<u>Fredericton</u>	
	1st	2nd	3rd	1st	2nd	1st	2nd	1st	2nd
	Yr.	Yr.	Yr.	Yr.	Yr.	Yr.	Yr.	Yr.	Yr.
1948-49	42	19	-	23	15	26	6	19	7
1953-54	33	18	11	27	8	13	6	14	10
1957-58	21	12	11	17	10	18	7	14	11
1958-59	20	17	6	23	9	29	6	12	5
Average Age	16+			16+		16+		16+	
Average Grade	VIII+			VIII+		VIII+		VIII+	

There would appear to be an insufficient enrolment to fully justify the special facilities and staff. The number of students who take the first year course but do not return for the second year averages more than 50 per cent.

Farm Experience: Almost the entire enrolment are sons of bona fide farmers.

Home Projects: Home projects are generally required and may be chosen from an approved list. They are graded as a separate subject on the basis of 50 per cent by inspection and 50 per cent for a written report. Membership in 4-H Clubs is acceptable as a home project.

Examinations: Although formal tests are given, emphasis is on standards maintained during the term. Where lessons on a particular topic are given as a "block" by a particular instructor, he usually gives tests and marks on his section of the course at its completion.

Accreditation: These courses are not recognized as credit towards high school standing nor towards degree courses in agriculture.

Costs: Students enrolled in these courses are given a federal-provincial grant of \$10.00 per week to defray costs of room and board if they live away from home. There is no tuition fee. Laboratory and tour costs as well as costs of necessary supplies amount to only \$10 to \$15 for one winter term.

Agriculture Education in the High Schools

Agriculture education is not being included in the program of any New Brunswick high school at the present time.

As regional high schools were established agriculture was generally offered as a vocational choice. As many as seven such schools provided training in agriculture at one time but after two or three years enrolments declined to the point where this subject was discontinued. The following data covers the period 1951 - 1959:

<u>Year</u>	<u>No. of Schools Offering</u>	<u>No. of Students Enrolled</u>
1951	6	14
1952	7	15
1953	5	11
1954	2	4
1955	2	17
1956	2	34
1957	1	1
1958	-	-

In providing for the teaching of agriculture the Department set up a course that would allow as much as approximately 25 per cent of the students' scheduled class time for this subject in each for Grades X to XII. Qualified agriculture teachers were engaged and were generally credited with doing their work quite capably. However, parents are reported to have been generally opposed to having their sons registering for agriculture training, because their ambitions were for other vocations.

Data available indicate that the first vocational course offered in New Brunswick attracted 53 day students to study agriculture. In 1957, there were 3,997 high school students enrolled for vocational courses but none of these were in agriculture.

Short Courses, Study Groups and Clubs

Except for 4-H Club work described elsewhere in this report, there is no regular program of agriculture short courses nor study groups in New Brunswick. However, extension activities of the Department of Agriculture frequently include farmers' meetings where the program provides one or more speakers or demonstrators on topics directly concerned with agricultural production. Some indication of the extent and scope of extension services provided to the farming public is shown in the following data obtained from the 1957 annual report of the Department of Agriculture:

District Agriculturists	16 and 4 assistants
Directors of Headquarters Branches	12
Fieldmen in Specialized Branches	14
Artificial Insemination Units	20 organized
Agricultural Fall Fairs	8
Agricultural Fairs Sponsored by Agricultural Societies	20
Fat Stock Shows and Sales	2
70 per cent Grade A Hog Shipping Associations	12
Beef Cattle Improvement Clubs	10 (180 members)
1-Week Sheep Short Course	1 (20 members)
1-Day Sheep Short Courses	2
Veterinary Laboratory Services	2,712 Specimens Examined 538 Milk Samples Checked 1,190 Butter Samples Checked
Correspondence Course Examination Papers Marked for DVA	252
Edited Poultry Branch News (Mailing List	6 Issues 2,299)
Farmers' Soil Samples Analyzed and Remedial Recommendations Made	955
Farm Forum Clubs Encouraged and Assisted	30

This list is not intended to be complete but does indicate the nature and scope of services to farmers. The services all have educational implications, and the mass impact is undoubtedly more significant than that of formal vocational education in agriculture.

QUEBEC

Diploma Courses in Vocational Agriculture

A Provincial Commission with regional representatives from counties, school boards, and members of teaching staffs meets four times a year to study problems and to make recommendations relating to operation of the Schools of Agriculture.

Diploma courses associated with Superior Colleges of Agriculture are offered at:

Ste Anne de la Pocatiere (Laval University)
Ste Anne de Bellevue-Macdonald College (McGill University)

Regional Intermediate Schools of Agriculture, administered by the Agriculture Education Branch of the Provincial Department of Agriculture, are located at:

Rimouski	Ste Martine	Nicolet
Chicoutimi	Mont Laurier	La Ferme
Sherbrooke	St-Barthelemy	St-Remi
Val d'Espoir	Ste Marie de Brigham	Ste Croix
Ville - Marie	Ste Anne de la Perade	

Diploma courses at the Superior Colleges are similar in purpose and program to those offered at the Regional Intermediate Schools, except that the more highly specialized staffs and the more fully developed facilities of the Colleges are available to serve the students.

Macdonald College at Ste Anne de Bellevue attracts primarily students from English-speaking families. The diploma course which it offers differs somewhat from that of other Schools of Agriculture.

Objectives: 1. Training for the vocation of farming,
2. Training for rural living and leadership.

Note: According to surveys and estimates made by school authorities approximately 80 per cent of the graduates engage in farming.

Duration: Two winter terms of approximately five and a half months each.

Course of Study: Largely determined by staff under supervision of the Agriculture Education Branch. Joint staff conferences are held each year. Manuals have been printed providing detailed programs of study in some subjects. Greater emphasis is given to the more basic subjects in the first year of the course and to the more practical aspects of farming and farm management in the second year.

Distribution of Class Time: Plant sciences, 20 per cent; animal sciences, 20 per cent; farm mechanics, 20 per cent; general, 40 per cent. General subjects include agricultural economics, languages, arithmetic, science and religion.

Facilities: School farms average 175 acres. Only one school has no farm. Most have a herd of dairy cattle; 12 have poultry; 10 have swine, and two have beef cattle. Accommodation is generally available for some shop work and farm mechanics. Dormitory facilities provide for student accommodation.

At the present time many of the schools do not have adequate provision for practical instruction in farm mechanics; however, plans are being made to expand these facilities.

Staff: Instructors in agricultural subjects hold B.Sc. degrees in agriculture; 50-60 per cent have teacher training. Attractive bursaries are available to encourage instructors to attend Teacher Training Colleges. The basic agriculture staff includes an instructor for plant sciences; one for the animal sciences and usually one for farm mechanics. General subjects are taught by religious and lay teachers, who also supervise the school dormitories. Sisters supervise meal serving and housekeeping.

Typically, Extension and Research Specialists visit the schools during the term and present one or more lectures or demonstrations on topics within their particular fields of training.

Extension work in the local area comprises up to 25 per cent of each instructor's time during the winter months and all his time during the summer unless he is assigned special duties in connection with the school farm or the summer course for girls.

Staff salaries are generally equal to those paid Extension Service Agronomes.

Securing the best type of instructor possessing sound agricultural and pedagogic training is always a problem in this field. The Department provides a generous bursary scheme to encourage qualified agriculturists to secure teacher training and has established a system of in-service refresher summer courses to insure maintenance of technical standards.

Enrolment: Enrolment at present averages about 90 per cent of capacity but has been as low as 80 per cent of capacity in recent years.

<u>Year</u>	<u>No. of Centres</u>	<u>No. of Students</u>
1958-59	16	1184
1953-54	18	1122
1948-49	18	1205

Approximately 80 per cent of those completing the first year course return the second year.

Girls are not accepted. Special four-month "Homemakers" courses are provided at nine of the schools in summer months, and about 20 per cent of the instruction time at these courses is devoted to agriculture, principally dairying, poultry, and horticulture.

Students must have been closely associated with farm life prior to entry to the schools: 90-95 per cent are sons of bona fide farmers.

Home Projects: Not required.

Farm Duty: Periods for observation and minor duties on the farm are scheduled in the mornings before classes begin for groups of students several times during the term.

Examinations: Evaluation is based on term work, tests and formal examinations.

Specialization: All students follow the same program at all schools, but some variations occur between schools because of local conditions.

Accreditation: There is no accreditation towards higher educational levels. Only exceptional students possess the academic qualifications to go on to further training in the degree courses.

Minimum Entrance Requirements: 16 years and Grade VII. Recently, the actual age and grade of students, on admission, is noticeably increasing.

Cost of Board and Room: \$30.00 per month less \$15.00 per month provincial grant.

Other Fees and Expenses: \$10.00 to \$20.00 per term.

Associated Activities: Nine of the schools offer a four-month homemakers' course for girls in the summer months. Agriculture instructors maintain an active contact with district farmers and centre their organized programs at the schools, particularly those relating to Young Farmers' Clubs and Live-stock Breeding Clubs.

The following is a partial list of the program of events at Ste Martine's school for part of the 1958 season, and indicates the broad scope of the contact of the school with the agricultural community:

- Three meetings of the Milk Producers' Association
- Meeting of local School Board
- Conference of Farm Radio Broadcasters and Agronomes
- Federation of Women's Institutes
- Two meetings of Fluid Milk Shippers
- R.O.P. Poultry Breeders' Meeting
- Meeting of County Co-operative Association
- Pure Bred Ayrshire Breeders' Meeting
- Meeting of Canning Vegetable Producers

Note: - Principal variations from the above general description of the diploma courses in vocational agriculture in Quebec occurring in the course offered at Macdonald College are as follows:

(1) The cost of room and board and tuition for one winter term amounts to \$355 less provincial grant of \$15.00 per month for a net cost of \$280, compared to \$100 as the corresponding figure for the other schools.

(2) During the summer months after the first year term, students are required to secure considerable factual information relative to their home farms. This data constitutes the basis for a rather extensive project in farm management studies during the second year of the course.

(3) Provision is made for a limited number of students to return for advanced studies in a third year when they pursue interests in specialized fields. However, the number availing themselves of this opportunity has never exceeded two or three students, and in the 1958-59 term none were enrolled.

(4) Girls and women are not excluded from the diploma course and in fact the enrolment generally includes one, two or three girls.

(5) Attendance has decreased sharply over the last ten years as follows:

1948	-	81 students
1953	-	48 students
1958	-	28 students

Although the other schools experienced a considerable decline in enrolment during the period 1954 - 1956, numbers increased in 1957 and were again approximately at former levels in 1958. This later increase has not occurred at Macdonald College.

(6) Provision is made for a choice in specialization in the second year where students can choose either an animal husbandry pattern or a fruit farming pattern.

Advertising and Publicity: The schools depend primarily on the good will and support of their graduates in encouraging continuing enrolment of new students. Agriculture instructors, through their extension activities, may also influence farm families through personal contact. Meetings, short courses and other community agricultural activities are centred at the schools. Support and encouragement towards attendance is effectively given also by the clergy, members of which are quite generally included on the school staffs.

Trends: (1) An increase both in the number of schools and in the number offering farm housekeeping courses.

(2) Expansion and improvement of facilities in all schools.

(3) A closer "tie-in" with the Extension Service.

Note: Conferences of local Agronomes and Junior Farmer Club supervisors are convened at each school with the objective of developing effective liaison.

(4) To encourage an increased age and grade level of students on entrance to the courses.

Agriculture Education in High Schools

Since agriculture education in the regular schools under the administration of the Department of Education comprises less than 5 per cent of the program of studies in any grade, and because the instruction given is of a general nature and not specifically geared to vocational needs, it cannot be considered as vocational training.

Although somewhat greater attention is given to instruction in agriculture as part of the studies in Grades VI, VII and VIII at the Agricultural Orphanages, the training is not considered by those in charge to be vocational.

Short Courses, Study Groups and Clubs

The Agricultural Extension Branch and the Agricultural Education Branch conduct the principal vocational education programs in agriculture. The former has over 150 Agronomes located throughout agricultural areas and a major part of their work is effected through agriculture clubs, short courses and farmers' meetings. In addition to directing the agriculture schools, the Agriculture Education Branch has a Young Farmers' Division with a staff of 14 fieldmen and specialists.

The Farm Housekeeping courses, the Juvenile Agriculture Merit Competitions and the program of short courses at the Superior Agriculture Colleges also make major contributions to vocational education for farm people.

The following data from 1957-58 reports, although incomplete, do indicate the scope of these programs:

<u>Organization</u>	<u>No. of Units</u>	<u>Duration</u>	<u>No. of Members or Attendance</u>
<u>Extension Branch</u>			
Short Courses	2	2 weeks	150
	4	5 days	350
	2	3 days	180
Agriculture Clubs	421		19,924
Agriculture Societies	89		28,241
Extension Meetings	3,785	part day	--
Demonstrations	2,153	" "	--
Farm Visits	108,083	" "	--
Junior Breeders' Clubs	161	6-10 meetings	4,041
<u>Agriculture Education Branch</u>			
Farm Housekeeping Courses	9	4 months	460
Junior Farmer Clubs	146	6-10 meetings	4,700

Organization	No. of Units	Duration	No. of Members or Attendance
<u>Superior Agriculture College</u> (Ste Anne de la Pocatiere)			
Winter Short Courses	5	15 days	150
Agriculture Co-operatives	1	3 days	
Poultry Course	1	3 days	298
Farmers' Union	1	1 or 2 meetings per month	200
Women's Institutes Conference	1	1 per month	200
<u>Macdonald College</u>			
Farmers' Short Course	1	3 days	50
Junior Farmers' Course	1	5 days	35-50
District Farmers' Course	2-3	6 nights	100

A very considerable amount of effective assistance is given in the over-all field of agricultural extension and further education by farm radio and television broadcasts, farm magazines and journals and by publications and fieldmen sponsored by private companies or co-operative organizations. Although much of this assistance is generated by self-interest there is a distinct trend toward employment of professionally trained agricultural personnel who effect close liaison between reliable sources of information and the farming public.

ONTARIO

General Purposes of Agriculture Education in Ontario

The Diploma Courses in Agriculture are considered to be definitely vocational. The vocational objective is made known to prospective students and an effort is made to restrict attendance to those whose background and experience indicate probable establishment in the vocation of farming or in a related occupation.

More than 50 per cent of the instruction time is devoted to the subject matter and technique of farming.

The majority of graduates from these courses do in fact engage directly in agricultural production or find employment in closely related fields.

On the other hand, agriculture education provided in Ontario high schools cannot properly be defined as vocational. No attempt is made to select students having any particular vocational interest in agriculture. Students who take this subject devote only about 20 per cent of their class time to it and shopwork combined.

There is no evidence that the study of this subject encourages any greater number of students from the high schools to enter the vocation of agriculture. Nevertheless, provision of this subject in the curriculum of Ontario high schools is resulting in some 50,000 students broadening their general education to include some understanding and appreciation of the subject matter, of the problems and the importance of this industry which is so important to the national economy and so close to the everyday life of the Canadian people.

There may be some danger that students, attracted to an interesting elective such as agriculture, will later regret that they did not pursue subjects required for full senior matriculation and university entrance. Other students, unless tactful and explicit explanation has been given, may feel that the high school course has provided a sufficient training in agriculture and may be diverted from enrolment in one of the agriculture schools where they would receive more complete training.

In the case of short courses, study groups and clubs, it is frequently more difficult to distinguish between those which must properly be defined as providing education in the vocation of agriculture and those which are general education for farm people. The Provincial Department of Agriculture employs a very considerable staff of trained persons at the Agricultural Colleges and the Experimental Farms and spends a major portion of its appropriation to provide extension and field services. Short courses, speakers and various facilities, publications and publicity, are directed specifically towards the education of the farm population with a view to improvement in production and management practices. Numerous farm organizations and commercial companies also conduct active programs, many of which are distinctly

educational. However, for purposes of this report the survey has given particular attention only to those courses that study agriculture production and management and that are organized on a program basis.

Diploma Courses in Vocational Agriculture

Administered by: Provincial Department of Agriculture.

Location: Guelph, Ridgeway, Kemptville.

Objective:

- (1) Training for the vocation of farming,
- (2) Training in farm living and rural leadership,
- (3) Training for possible employment in related industries or activities.

Duration: Two winter terms of approximately five and a half months each.

Course of Study: Largely determined by the staff under supervision of each school's director. A joint conference of staffs was begun in 1958.

Distribution of Class

<u>Time:</u>	<u>Subject</u>	<u>Per Cent</u>
	Plant Sciences	30 - 50
	Animal Sciences	10 - 30
	Farm Mechanics	15
	General	25

Facilities: Extensive farms shops and laboratories, along with every common type of crop, livestock and poultry. There is a considerable program of building expansion. Residential accommodation is available for all students.

Staff:

Qualifications: Minimum of B.Sc. in agriculture, with a fairly narrow field of specialization. Teacher certification is only incidental.

Additional Duties: Agricultural research, laboratory and extension work.

Salaries: The appointment is "Instructor and Extension Specialist", and salaries are about equal to those of Agricultural Representatives.

Enrolment: At present, enrolment is at capacity but recently it was as low as 50 per cent of capacity. On average, 25-30 per cent discontinue after the first year of the two-year course.

Few girls attend, and they are not specifically excluded.

Familiarity with Canadian farm practice is required on enrolment. Actually 60-70 per cent at Guelph, 80 per cent at Kemptville and 95 per cent at Ridgetown are sons of bona fide farmers.

The minimum entrance requirements at Guelph are 18 years and Grade X standing; at Ridgetown 16 years, and at Kemptville either 16 years and Grade X standing or 17 years with less than Grade X.

On average, students on enrolment are 19 years with Grade XI standing at Guelph; 17.4 years with Grade X standing at Ridgetown, and 18.9 years with Grade X standing at Kemptville.

Enrolment at the three schools, over past five-year intervals, was as follows:

<u>Year</u>	<u>Guelph</u>	<u>Ridgetown</u>	<u>Kemptville</u>
1958-59	145	146	107
1953-54	142	84	62
1948-49	84	-	79

Home Projects: Required at Guelph and Ridgetown but not at Kemptville.

Farm Duty: Not required except for teaching purposes or the observation of farm practices.

Examinations: Both formal and based on term work. A pass mark of 40 per cent with average of 50 per cent is required.

Specialization: All students are required to take the prescribed program of classes except at Guelph where students may choose to specialize in horticulture in lieu of some classes in animal husbandry.

Accreditation:

- (1) With Grade XII - Entrance to 1st year of degree course.
- (2) With Grade XIII - Entrance to 2nd year of degree course.

Student Costs: The cost of board and room is \$10 a week at Guelph, \$8 at Ridgetown and Kemptville. Other fees and expenses total \$145, \$70 and \$76 respectively.

Student Grants and Bursaries: Scholarships, bursaries and prizes are offered annually at all three schools, amounting to approximately \$4,000 at Guelph, \$2,000 at Ridgetown and \$4,700 at Kemptville.

Associated Courses and Activities:

Each school and the staff and facilities associated with it serves as headquarters for agricultural extension in its area of the province. Extensive testing work in field crops and animal husbandry is integrated with research programs of the Ontario Agricultural College as are laboratory and

field services in agricultural engineering and veterinary work. Many institutes and colleges, notably the Ontario Veterinary College and Macdonald Institute at Guelph, the forestry station at Kemptville, and the experimental farm at Ridgetown, provide facilities and staff in specialized fields that are employed to some extent in giving useful training to students in the diploma courses.

Advertising and Publicity:

In addition to the indirect publicity arising out of its general activities, each school maintains close contact with district high schools, its own alumni and all major farm organizations, particularly where farm youth participate. At Kemptville members of the staff are specifically assigned to contact current and prospective students at their home farms during summer months. The home farm projects serve a useful purpose in this relationship. The O.A.C. has a highly developed Publicity and Public Relations Department which serves the diploma course as well as other divisions. At Ridgetown, the Dean of the Student Residence devotes his full time during the summer months to contacting prospective students.

Current Problems and Future Trends:

Although extension, research and farm service activities provide an excellent medium for acquainting members of the staff with current farm practices, as well as with research developments, these very activities inevitably result in some disruption of teaching schedules. Frequent substitutions and changes in program are the result.

Effective teaching of basic science is at present the most difficult staff problem.

When the same staff is used for degree course or research work, there is a tendency to regard the teaching of vocational agriculture as a "Joe Job".

Joint staff conferences have been inaugurated and will probably continue as an important means of developing a greater degree of uniformity in basic program, courses of study and regulations.

The "Third Year" scheme whereby a limited number of graduates are given an opportunity to do advanced work in farm mechanics at Kemptville is proving popular, and may be extended to provide for specialization in other subjects and at the other schools.

Enrolment seems to be subject to considerable variation, related directly to the alternative employment opportunities available to prospective students. However, a considerable building program is in effect at each centre, and school authorities anticipate larger enrolment in the immediate future.

Vocational Agricultural Education in High Schools in Ontario

High school students in Ontario generally have the opportunity to study some of the subject matter of agriculture.

Most district high schools offer "Agricultural Science" in Grades IX and X. This course is an expansion of the prescribed courses in Chemistry and Physics to provide practical application and interest stimulation through classroom and project studies of field crops, horticulture, poultry, dairying, beekeeping and livestock. Some special facilities and equipment such as flower pots, display shelves, an incubator, a school garden and crop plot areas, as well as agricultural publications and bulletins are usually provided for teaching purposes. Class time devoted to the more specifically agricultural topics amounts to approximately 5 per cent of the total term. Girls as well as boys usually take agricultural science because no other science is offered at most district schools.

Teachers of this subject are generally qualified science specialists, and usually have taken special summer courses or hold degrees in agriculture.

Some school boards encourage teachers to visit home farms of the students in order to inspect and to provide guidance in the conduct of home projects relating to agricultural topics. But no special grants are paid to school boards for providing instruction in agricultural science.

Approximately 65 per cent of all district high schools have established "Departments of Agriculture" where provision is made to teach agriculture as an elective subject. Since the alternative available to boys is usually music or art, most students choose agriculture irrespective of their background or any special vocational interest in this subject. Topics of study are organized on a grade basis for which a suggested schedule is provided by departmental headquarters but development of subject matter details is left largely to the initiative of the teacher. Instruction in this subject comprises 10 per cent of the school term in Grades IX and X.

Because home economics is generally provided for girls they do not normally take agriculture, although they are not specifically excluded.

Special facilities and arrangements recommended to school boards for the establishment of a department of agriculture include a designated classroom, a school garden and crop plot of one-quarter to two acres, a two- or a four-wheel tractor, one or more hives of bees, a poultry pen and a farm shop. The instructor must hold a B.Sc. degree in agriculture.

Home projects are a required part of the course and provision is generally made for the agriculture teacher to visit home farms of students to supervise and inspect these projects. Teachers are paid either one month extra salary or at a rate of \$1.50 per hour and 8 cents per mile for this work. The effectiveness of such home farm visits depends on the interest and personality of the teacher.

A special provincial grant based on average attendance is paid to boards with Departments of Agriculture. Related activities include membership in 4-H Clubs, and visits to well-established farms in the area.

The high schools of Ontario have several noteworthy features.

Agriculture is given considerable attention in the general education pattern at the high school level. No particular effort is made to restrict its presentation to rural students or to those who have a real vocational interest in this field.

The Department of Education does not lay down specific requirements for either the course of studies or for the equipment and facilities where agriculture is to be taught. General recommendations and suggestions are provided but there are no specific regulations to be complied with by either school boards or teachers.

Direction to teachers and school boards in regard to subject matter, equipment, facilities and presentation comes largely from one of the resident secondary school inspectors of the Department of Education who has developed considerable interest, information and experience in the teaching of agriculture in high schools. In a number of schools the board appoints Agriculture Committees to act in an advisory capacity.

No specific arrangement is in effect to require co-operation between the teaching of agriculture in the high schools and the activities of the extension service branch of the Department of Agriculture. However, quite generally agriculture instructors establish contact and maintain liaison with the Agricultural Representative. Indeed, 4-H Club work is often jointly supervised by the Agricultural Representative and the agriculture teacher from the high school, and many high school students are members of 4-H Clubs. School facilities are available for 4-H and Junior Farmers' Club meetings.

The evaluation of student achievement and examinations are conducted entirely at the local level as is the case in all subjects to Grade XII. Agriculture is in the elective category, and as such requires somewhat less rigid standards of achievement for students. Actually students seldom fail to achieve pass standing in this subject in any grade. Incentive toward good student effort is dependent on the inherent interest of the subject and on the initiative and personality of the instructor.

Student work relating to agriculture studies is displayed to the public at an annual Achievement Day at each school.

Statistics Based on Official Department of Education Reports, 1958:

Agricultural science taught in Grades IX & X	157 Schools
Agricultural science taught in Grades XI & XII	130 Schools
Total enrolment of students in agricultural science..	55,384 Pupils

Agriculture Taught where Schools have Departments of Agriculture:

Number of schools offering agriculture in Grades IX & X ... 99
Total enrolment of students in agriculture 10,643

Teachers:

A total of 450 teachers participate in the teaching of agriculture or agriculture science. Of these 250 hold B.Sc. degrees in agriculture. The rest qualify through attendance at one or more summer short courses of six weeks per summer at the O.A.C. or at special courses given in the Teacher Training Colleges.

Teachers of vocational agriculture are constantly faced with the problem of "keeping posted" on current agricultural developments.

Regional Conference:

Six one-day regional conferences of teachers, principals and school board members were held at six rural centres in 1958. Attendance at these is optional and at personal time and expense but, nevertheless, attendance has been reasonably good.

Related Activities:

5,280 pupils were members of the 4-H Clubs. Thirteen high school classes were represented in the international ploughing matches. 5,398 pupils from 45 schools made official visits to the Royal Winter Fair as guests of the management.

Study Groups and Clubs in Ontario

Programs Sponsored by Agricultural Institutions:

(1) The Ontario Agricultural College, Guelph.

Winter short courses have been conducted over a period of many years serving the farm public with information and an opportunity for the study of a variety of timely topics relating to farm practice, market situations and problems affecting rural living. In 1958, the courses ran for four days during which different programs were provided for the following groups:

Marketing and Co-operation	(89 persons)
Agricultural Mechanics	(86)
Farm Buildings and Rural Electrification	(39)
Tractors and Farm Machinery	(28)
Livestock Breeding	(76)
Soils and Land Use	(83)

Other short courses provided to meet requests from those engaged in special branches of agricultural production included:

5-day courses - Greenhouse Growers'	(86)
- Poultrymen's	(281)
1-day courses - Gladiolus Growers'	(43)
- Commercial Florist's Growers'	(54)
- Nurserymen's	(23)

(2) The Kemptville Agricultural School

Co-operation and assistance is given to various community organizations in sponsoring a variety of programs to meet current interests and demands from time to time. In 1958, Soil and Crop Improvement Associations held a two and one-half day conference attended by 450 farm people. One-day programs included - a Poultry Field Day (200 persons); a Grassland Field Day (3,000); a Junior Farmers' conference (250) and numerous 4-H meetings, demonstrations and competitions.

A special one-term advanced diploma course in farm mechanics proved so popular in the 1957-58 term that it may become permanently established. Enrolment is restricted to graduates of the two-year course in vocational agriculture and numbers are limited to 16 boys selected for their special interest and aptitude in this type of work.

(3) The Western Ontario Agriculture College, Ridgetown

No advanced diploma courses have been offered since 1950 when this school opened, but consideration is being given to the possibility of providing "Third Year" courses where graduates of the two-year vocational course will be given an opportunity to specialize in such topics as farm mechanics, herdsmen, or seed production and marketing.

Attendance figures for special functions at the school in 1958 are estimated by school authorities as follows: Short Courses and Farmer's Week - 2,000; Conventions - 1,000; 4-H Visits - 1,000; Junior Farmers - 500; Parents' visits - 250; Farmers' Meetings - 500; High School Students - 500; Miscellaneous - 500.

Programs Sponsored by Extension Services:

(1) The Rural Community Night Schools

The 6-week and 3-months short courses that were originally sponsored in connection with the teaching of agriculture in rural high schools were discontinued in 1940 as more and more rural young people attended centralized schools until they found full employment. Evening classes were a natural development to fit the hours when students would be available.

Rural Community Night Schools are a series of evening classes that are established for the benefit of people in rural communities and in the adjacent urban communities. They are a co-operative undertaking, operated by local committees, with assistance from the Extension Branch of the Department of Agriculture and the Community Programs Branch (Department of Education) in

planning, management and costs. They may include classes in agricultural, educational or recreational subjects. Popular topics at present are farm welding, woodworking, rural electrification, farm buildings and farm business management.

Present arrangements are to limit each county or district to one community night school in any one season and to restrict such schools at any one centre to two successive years. Classes usually meet once a week over a period of twelve weeks. During the winter and spring months of 1957-58 there were 21 Rural Community Night Schools with enrolments varying from 50 to 250 persons.

(2) Farm Management Clubs

These clubs are currently very popular and are rapidly expanding. In 1958, there were 33 clubs with an average membership of 40-50 persons, mostly younger farmers. Guidance in farm accounting and farm business analyses is being given by the Agricultural Economics Division and special interest centres around dairy-type farms.

(3) Crop Improvement Associations

Livestock Breed Associations and various Agricultural marketing organizations hold a variety of meetings, field days and conferences through the year. Current interest centres on farm visits in the form of "Sunrise", "Twilight", and "Barn Meetings" where local farmers gather at times most convenient in relation to their home farm duties to observe, study and discuss practices and developments in relation to agricultural production and marketing. The services of technical men from the agricultural colleges and extension services are available to assist with the programs, but increased emphasis is being given to local leadership and participation in the program.

(4) 4-H, Junior Farmers' Clubs and Junior Institute Clubs

Probably the greatest impact on the improvement of agricultural practice in Ontario is being effected through the Junior Clubs. The 4-H Clubs have doubled in numbers and membership during the past ten years. This development has resulted in greater dependency on local leaders for supervisory and guidance responsibilities. Another development that is probably related to this is a definite trend towards more emphasis on "citizenship", with consequently less attention to the acquiring of skill and information in production techniques. Some concern lest "the pendulum swings too far" is being expressed by agriculture officials.

In 1957-58 there were 234 Junior Farmer and Junior Institute Clubs with a total membership of 6,700, which held 10-12 meetings throughout the year.

Projects for the Junior Farmer clubs vary over a wide range, such as public speaking, debating, livestock and seed judging, drama, soil judging, and a host of community enterprises dictated by the needs and interests of the community in which the Junior Farmer or Junior Institute club operates.

The monthly meeting pattern is developed around a business meeting and either a joint or separate education program for boys and girls. The educational program may vary widely. The boys may have speakers, films and discussions on livestock production problems, soil and crop problems, farm mechanics, and marketing, while the girls' program deals with homemaking topics.

Some indication of the scope of the services extended to the farming public by way of information and education is shown in the following data given in the Report of the Minister of Agriculture for the year ending March 31st, 1958:

Agricultural Representatives, Associate and Assistant Representatives - 89

Fruit & Vegetable Extension Service - 9 specialists

Agricultural Engineering Extension Service - 16 specialists

Tobacco Extension Service - 2 specialists

District Home Economists - 22

Home Economics Supervisors and Field Assistants - 23

Farm Management Clubs - 37

Members - 853

Farm Account Books distributed - 6,087; analyzed - 483

Livestock Breeders' Clubs - 227

School Fairs assisted - 96 (705 schools participating)

Plowing Matches - Senior - 59; Junior, 14

Press Releases - 3,828

Radio Broadcasts - 2,205

Telecasts - 137

4-H Clubs - 676 (11,502 members)

Farm Boys' and Girls' Camps at Agricultural Fairs where programs typically include livestock judging competitions, agricultural quizzes, farm machinery identification competitions, etc.:

Central Canada Exhibition, Ottawa - 500 boys and girls

Peterborough Exhibition - 95 competitors

Canadian National Exhibition, Toronto - 194 competitors

Western Fair, London - 209 competitors

Inter-County Livestock Judging - 28 teams - 3 members each

4-H Calf and Swine Club Championships - 614 entries

Queen's Guineas Competition at Royal Winter Fair - 221 entries

Junior Farmer associations and Junior Institutes - 245 clubs

(6,345 members)

Provincial Public Speaking competitions (agricultural topics) - 30 entries.

MANITOBA

Diploma Courses in Agriculture

Only one course of this type is currently being offered in Manitoba. It consists of two winter terms of approximately six months each, conducted as an associate course at the University of Manitoba. During the period 1947-1958 a 17-week course was also offered at Brandon. Students who successfully completed it were given credit for the first year and could enter the second year of the two-year course at the University. However, enrolment declined to such an extent that it became no longer practical to continue operation.

Enrolment in the vocational course at the University has also declined sharply in recent years. As a result the University authorities, together with others interested in meeting the educational needs of the farming public, established the basis for a major revision. The new course began in the fall of 1958.

Fundamental elements of the old course were retained but because of the changing pattern of the agricultural economy, greater emphasis is being given to farm management and marketing. Rural citizenship and leadership training continue to occupy an important part of the program but less time is being devoted to details of production techniques and to the development of skills in such subjects as farm mechanics. The opinion is held that much of the desired training of this type can best be given in specialized short courses.

Administered by: University of Manitoba, Faculty of Agriculture.

Objectives: (1) To provide training in agricultural production, management and marketing practices.
(2) To provide training for rural citizenship and leadership.

Course of Study: Largely determined by the staff under supervision of the Director.

Duration of the Course: Two winter terms of approximately six months each.

<u>Time Allotment:</u>	<u>Subject</u>	<u>Per Cent</u>
	Plant Sciences	15
	Animal Sciences	10
	Farm Mechanics	20
	General	
	(including Farm Management and Marketing)	55

An extensive study of agricultural business, particularly the grain and meat industries, is included in the second year of the course. There is no specialization except insofar as the home farm projects provide it.

Facilities: Extensive farm, shops and laboratories with all the common types of livestock, crops, and poultry (the same facilities that are available to students in degree courses).

Staff: University staff instructors and research personnel.

Entrance Requirements: Not specified as to age and grade. All applicants meet personally with a selection committee that makes its selection on the basis of real interest in farming, sufficient maturity and educational background to grasp and benefit from the basic aims of the course. The 1958-59 class averages 19 years of age, with Grade X standing.

<u>Enrolment:</u>	<u>First Year</u>	<u>Second Year*</u>	<u>Total</u>
1958-59	20	29	49
1953-54	32	50	82
1948-49	31	49	80

Drop-out between first and second year in recent years (of the unrevised course) has been about 30 per cent.

No girls were enrolled in the 1958-59 class.

Home Projects: Knowledge gained during the course must be applied to the farm from which the student comes, or to the farm he proposes to operate. The course requires assignments and discussions on farm planning with particular reference to the student's home farm. Students are required to participate in a summer tour of 10 days to two weeks duration through Manitoba where progressive farms, experimental stations and various soilzones and types are studied. Comprehensive and analytical reports on these studies by the student are required. Some of the students may be required to augment their farm experience by employment on selected farms before diplomas will be granted to them.

Residential Accommodation: Generally not available to diploma students because of competition with degree students for limited space in University residences.

Costs: Tuition fees, formerly \$35.00 a term, have been increased to \$125.00 a term for 1958-59. Total cost of room and board, fees, books, and classroom equipment averages about \$460. The new requirements for the summer tour will increase this amount considerably. However, an extensive scheme of scholarships and bursaries providing up to \$500 per student per year has been established to cover the basic financial needs of all selected students requiring assistance.

Accreditation: Only a few diploma course graduates have the high school standing required for entrance to the degree courses. However, those who do have this standing may be given credit in a sufficient number of degree subjects so that, with one additional summer school session, graduation could be achieved in three years.

* Second year classes include students who completed the first year at Brandon.

Current Problems and Future Trends:

Those who recognize a need for specific education in the vocation of farming are inclined to believe that inadequately planned training programs are to blame in failing to attract an enrolment commensurate with the importance of this vocation.

Vocational education in agriculture poses distinctive problems in staff qualifications, curricula planning and subject material, arising out of the fact that up to the present at least, the great majority of trainees are being prepared to conduct business enterprises rather than to secure employment for wages. Analysis of student project studies from a business standpoint requires a much greater amount of individual staff attention and better sources of current background statistics than are required in lecture-type or skill-developing shop-type lessons.

Many of the potential students for vocational training programs may not be sufficiently mature or sufficiently experienced to profit by a study of detailed farm business management. Very often, when the needed maturity and experience has been gained, personal involvement in family and business enterprises precludes enrolment in a training course.

The University staff are currently working out details of the new first year course and are preparing plans for the 1959-60 term. Principal aspirations centre on the need for a separate residence for diploma students on the campus so that objectives relative to citizenship and leadership training can be developed under favourable conditions. It is believed that a residence for the diploma students could be in effect a laboratory in community organization and social relationships.

Agriculture Education in High Schools in Manitoba

Agriculture as a subject, general or otherwise, is not currently being taught in Manitoba high schools. However, the Department of Education has an approved program of studies setting forth arrangements for providing a course in vocational agriculture, for any high school wishing to put it into operation.

The program provides for either of two patterns. Under one, students may choose agriculture subjects in lieu of subjects required for the matriculation course and may receive credit towards a high school diploma. The other pattern offers a three-year program for Grades XI and XII whereby students could complete full matriculation requirements and have, as well, the whole program of vocational agriculture. Nevertheless, no high school in Manitoba offered this vocational course in the 1958-59 term.

Over the period 1949 to 1958 the school board at Dauphin did undertake to offer such a course. Good facilities including a school farm, shops, etc. were provided. However, their experience in this project met with such discouraging results that it was discontinued in December of 1957 and was not offered in 1958-59. Small enrolment, indifferent interest on the part of students and difficulty in securing satisfactory instructors are reported to have been the chief obstacles.

Short Courses, Study Groups and Clubs

(1) University of Manitoba

In order to extend its facilities and educational services to the farming public, the Faculty of Agriculture offers a number of short courses to interested persons 18 years of age or over. Close liaison is maintained with the Extension Branch of the Provincial Department of Agriculture and with various branches of Federal Department of Agriculture services in Manitoba.

Short courses held in 1958 were as follows;

<u>Topic</u>	<u>Duration</u>	<u>Tuition</u>	<u>Attendance</u>
Dairy School	10 weeks	-	5
Poultry Conference	3 days	-	400
Beekeeping Short Course	6 days	\$2.50	10
Farmers' & Homemakers' Conference	5 days	2.50	600
Horticulture Conference	6 evenings	-	625

Field Days at appropriate times are devoted to livestock, field crops, beekeeping, home gardens and vegetable production.

(2) Brandon School of Agriculture

For reasons peculiar to the vocational agricultural training program of Manitoba, the program of the Agricultural and Homemaking School, Brandon, was substantially changed in 1958-59.

The new program consists of a series of short courses of from one to three weeks duration covering various aspects of farm practice. Eighteen such short courses were offered under the sponsorship of the Manitoba Department of Agriculture in co-operation with the Provincial Department of Education and the Federal Department of Labour under the terms of the Vocational and Technical Agreement.

The enrolment for the various courses was as follows:

Farm Management	16
Welding No. 1	18
Beef Cattle	8
Rural Leadership	38
Women's Short Course No. 1	11
Swine	12
Farm Motors	15
Dairy Husbandry	16
Women's Course No. 2	20
Welding No. 2	19
Weed Inspector's Course	39
Agricultural Conference	61
Leadership Course	27

Facilities of the school are also used by various rural organizations for schools of instruction. These schools are usually of one-week duration. Five such courses were held in 1958-59.

The Brandon School is recognized as the centre of agricultural activity in western Manitoba, and 96 meetings of an agricultural nature were held during the year with a total attendance of 6,060.

The School staff consists of four persons including the Principal, who also serves as Agricultural Representative for the area, the Assistant Principal, who serves as Extension Engineer for Western Manitoba, the Associate Principal, who serves as district Home Economist, and a stenographer. Other instructors from the Manitoba Department of Agriculture, Federal Department of Agriculture, Brandon College, the University of Manitoba and commercial organizations participate in the courses.

Although the enrolment in the various courses in 1958-1959 was in most cases disappointing, it is felt that this was largely due to the fact that farm people were generally not acquainted with the new purpose to which the facilities and staff of the school were being devoted. It is anticipated that a similar program will be followed in 1959-60, but farm organizations will be involved in the planning of the courses and will accept some responsibility in acquainting farmers with this program.

Based on the 1958-59 experience, future developments at Brandon School will be influenced by the following factors:

- (a) In promoting technical short courses, mature farmers with a minimum of two years farming background should be encouraged to attend. Young people directly out of high school do not appear to have the necessary interest and background to gain most from the courses.
- (b) Courses in which the student body consists of selected delegates are more successful than open courses, e.g. Weed Inspector's Course, Leadership Courses, for which students are selected by farm organizations.
- (c) The importance of securing the assistance of farm representatives in course planning cannot be over-emphasized.

(3) Extension Service of the Manitoba Department of Agriculture

Various short courses organized by the Agricultural Representatives together with local advisory committees are held at numerous district points. These courses are open to the general farming public and typically are offered during the late winter months. Programs vary from one to five days and feature subjects of special current interest. The recent trend is towards more attention to farm management, marketing and agricultural engineering. Demonstrations on pole barn construction and plumbing installations have proven popular.

The following is data relating to these activities in 1958:

Agricultural Representatives held 119 short courses at which total attendance was 7527.

Farm Accounting Courses attracted 242 participants.

Horticulture Exhibitors' Schools (one day) - 5 centres, attendance, 292.

Home Gardeners' Course (one day) - 75 persons.

A five-day Leadership Course for Farm Women - attendance 60-75.

Exhibitors' Schools - women's work - attendance 896.

4-H Club Camps at 8 centres - attendance 677.

4-H Club Leaders' Conferences - attendance 989.

Short Courses and conferences at the Agriculture and Homemaking School - nine in number - total attendance 487.

A feature of the 1958 program was the interest in the formation of Farm Business Clubs. Reflecting the current attention being given to "the business end of farming" these clubs are organized for the specific purpose of enabling their farmer members to analyze and study the business aspects of their farming operations. Five clubs with a total of 120 members have been formed and indications are that there may be 15 to 20 clubs in operation in the near future. Membership centres on young farmers 18 to 30 years of age.

The club program usually consists of one meeting a month with studies centring on agriculture engineering in the first year. Succeeding years will focus attention on agronomy, livestock and management in that order. Technical assistance is given to the clubs by the Agricultural Representative service and by the Faculty of Agriculture.

A Farm Management Association of 50 farmers at Carman is assessing its members \$35.00 each and is receiving grants from commercial organizations for the purpose of employing a professional economist to assist in gathering data and analyzing members' records from a business standpoint. The Faculty of Agriculture is also co-operating in this project because of its interest in gathering data of special use in farm management studies.

SASKATCHEWAN

The Diploma Course in Vocational Agriculture

The School of Agriculture, within the College of Agriculture, offers a practical course of study for young farmers who intend to return to the farm. The course is so devised that students may take either one or two years; those who successfully complete the two-year course are awarded the Diploma in Agriculture.

Objectives: (1) Training for the vocation of farming,
(2) Training for rural living and leadership.

Duration: Approximately five months each school year, opening about the first of November and ending about the end of March.

Course of Study: Largely determined by faculty members under supervision of the Director. Distribution of class time over the two-year course is approximately: Plant Sciences, 22 per cent; Animal Sciences 22 per cent; Farm Mechanics 28 per cent; General, including Farm Management, 28 per cent. No provision for specialization is made in the program of lesson periods but a distinctive feature is the scheduling of Saturday morning club meetings. Each student elects membership in one of the following clubs: Livestock, Agronomy or Farm Mechanics. The clubs, under supervision of staff members, conduct activities within the scope of the subject indicated and provide students with an opportunity to pursue studies in which they are especially interested. Programs usually include projects, tours, and discussion sessions.

Facilities:

Extensive classrooms, shops, laboratories and farms (the same facilities which are available to degree students). Accommodation in a separate residence on the campus is available for School of Agriculture students.

Staff:

Instructors are generally members of Faculty of Agriculture departments with the exception of two or three part-time teachers for subjects not normally taught in the degree course, who typically are engaged in private farming operations in the summer months.

Minimum Entrance Requirements:

Grade IX, and 17 years of age. The 1958-59 first year class had an average enrolment standing of about Grade XI, with 39 per cent having Grade XII. The average age is 19.8 years which is considerably higher than in recent years. Students are required to have had at least one full summer season of farm experience. Actually over 95 per cent are sons of bona fide farmers.

Enrolment:

1958-59, 88; 1953-54, 133; 1948-49, 200. Drop-out between the first and second years averages 25-35 per cent.

In spite of the excellent facilities and program of instruction offered, the response in terms of numbers of students enrolling for the course has steadily declined. The 1958 enrolment was the lowest since the war years.

Home Projects: are a required unit of work in the program of the School of Agriculture. Their purpose is to encourage and assist students to apply the information gained from the course to their own farming situations and to link the work of the first and second years. Each student must select at least one project from a list and must submit a satisfactory report to the school early in the fall term. The Director visited most of the first year students at their home farms in 1958 and inspected progress on their summer projects.

Evaluation:

Based on term work, club work, tests, reports and formal examinations.

Accreditation:

The Department of Education grants one Grade XI credit to students who successfully complete the first year, and one Grade XII credit for the second year course.

Note:

The Department of Education allows two credits for vocational agriculture and one credit for farm shop work out of a total of nine credits in Grade XI, and the same number of credits in Grade XII in the High School vocational agriculture program.

Several students each year proceed from the diploma course to the degree course. Such students can receive credit for about four-fifths of one year's work towards the degree and subsequently, with one Summer School session, can graduate in three years instead of the four years regularly required for the degree course.

Costs: Board and room - \$61.00 a month
Tuition fees and supplies - \$150.00

Scholarships and Bursaries:

Commercial firms, farm organizations and the Canadian vocational training program offer awards totalling in excess of \$9,550 to students enrolling in the School of Agriculture course.

Agriculture Education in High Schools

A. General Agriculture

Agriculture is offered as an elective subject in Grade XI in most District high schools and in some city schools. Although some girls enrol in this subject, classes consist mostly of boys. In 1958, 3,557 students out of a total of about 8,300 received gradings in agriculture which would indicate that probably 75 per cent of the boys in Grade XI received instruction in this subject. It is taught simply as a general education subject without any special qualifications required of the teacher and no restrictions on the enrolment respecting farm background nor experience. Instruction time usually amounts to four periods a week.

Similarly, Agricultural Economics is offered in Grade XII. 640 students out of a total of about 5,900 received gradings in this subject in 1958. The purpose of the course is general education within the field indicated and it is not intended to be vocational.

B. Vocational Agriculture

Experimental programs in vocational education in agriculture have been going forward for several years under the sponsorship of the school unit boards at Kindersley, Kinistino and Sturgis. These programs have been of two kinds: (a) for high school students as part of their training towards a high school diploma; (b) for practicing farmers.

In 1958 the Department deemed results of the experimental programs sufficiently successful to justify enlargement of the scheme to any school unit in the province that could meet the requirements for approval. A fourth unit began operations in this field in the 1958-59 term at Rosetown.

The program for adults is described on page 70, but it should be noted here that the adult program has generally preceded the one offered in the high schools, and is credited with having fostered interest in and created the demand for the high school vocational agriculture program in school units.

Administration:

The program is authorized by the Department of Education, under supervision of the Director of Vocational Education. A provincial advisory committee has been established with representation from the Departments of Education and Agriculture.

At the local level, a co-ordinating committee is set up including the Agricultural Representative for the district, a representative of the Rural Municipality and a representative of the School Unit Board.

Objectives:

- (1) To provide the student with operational and managerial experiences to aid him in making a start in farming.

- (2) To develop in farm boys a sound understanding of competent citizenship and rural leadership.
- (3) To encourage development of a scientific approach to farming operations.

Course of Study:

The program of study provides for vocational agriculture* and farm shopwork in each of the grades from IX to XII as follows:

Grades IX & X	- Vocational Agriculture	- 2 hours per week -- 1 credit
	Farm Shopwork	- 2 hours per week -- 1 credit
Grades XI & XII	- Vocational Agriculture	- 4 hours per week -- 2 credits
	Farm Shopwork	- 2 hours per week -- 1 credit
Total: 4 years -- 10 credits.**		

The main divisions of the program include classroom instruction, supervised projects on the home farm, farm club work and farm shopwork. The course of studies for the classroom work is outlined on a grade basis whereby units in farm management, soils, field crops, livestock, horticulture, and farm mechanics are covered in Grade IX. Each succeeding grade enlarges upon the work of the preceding year except that a unit on farm organizations is added in Grades XI and XII. Instruction in farm shopwork may be provided concurrently with classes in general shopwork.

Supervised projects on the home farms of students are planned and studied at school and with parents. Instructors inspect and advise on the progress of these undertakings at frequent intervals during the school year and summer months. Written reports and analyses by the students are required as part of this division of their studies. In actual practice, instructors visited each student's home farm eight to ten times during the year 1958, and assessed final gradings on the basis of 50 per cent for classroom work and 50 per cent for the project. However, no club work program has been established and incorporated into the requirements of the high school course in vocational agriculture.

Staff:

Graduation in Agriculture from an approved university and two summer school sessions in vocational agriculture education are minimum instructor

* Choice of vocational agriculture subjects by high school students usually means that they must omit taking a language other than English and consequently they will not be able to meet University entrance requirements in certain faculties. However, they could enter the Faculty of Agriculture where such a language is not a prerequisite.

** Although eight credits comprise a full year's work, nine credits are recommended in each of the high school grades.

requirements. Practical farming experience is a desirable prerequisite. Instructors are employed on a year-round basis.

In 1958-59 one agriculture teacher was employed at Kinistino, one at Rosetown and three at Kindersley. Their work was supplemented by part-time instructors assisting with adult clubs.

Facilities:

There are no special facilities to teach vocational agriculture in the high schools. The supervised farming projects are carried out on the students' own farms. Hence the program is limited to students who have farm available to them.

Enrolment:

	Grade	1954-55	1955-56	1956-57	1957-58	1958-59*
<u>Sturgis School Unit</u>						
(started 1955)						
Voc. Agric.	IX	--	--	4	--	--
	X		--	9	--	--
	XI		--	--	43	--
	XII		--	--	9	--
Adult Clubs (membership)			73	125	143	--
<u>Kinistino School Unit**</u>						
(started 1954)						
Part of Science	X	--	--	--	40	Not available
Part of Voc. Ag.	XI	--	3 schools	6 schools	72	Not available
Adult Clubs		6 clubs	7 clubs	8 clubs	77	230
<u>Kindersley School Unit</u>						
(started 1954)						
Voc. Agric.	IX		18	20	13	29
	X		13	15	19	16
	XI		--	7	4	10
	XII		--	--	4	2
Adult Clubs (families)		330	345	375	390	Not available
<u>Rosetown School Unit</u>						
(started 1956)						
Voc. Agric.	IX	--	--	--	--	16
Adult Clubs (membership)						216

* The teaching of Agriculture at Sturgis had to be temporarily suspended in 1958-59 due to resignation of the teacher and failure to procure a satisfactory replacement.

** At Kinistino details of enrolments prior to 1957 were not available and 1958-59 enrolments were not definite at time of survey.

Short Courses, Study Groups and Clubs

Although responsibilities for instruction and program details for most of the training courses and study groups are largely in the hands of the Department of Extension at the University, much of the promotion and organizational work at the local level is done by the Agricultural Representatives. Training courses not given at the University of Saskatchewan are generally staffed and financed by grants made available under the Canadian Vocational Training Agreement.

The following is an outline of short courses conducted in 1957-58 under supervision of the Department of Extension:

University of Saskatchewan:

<u>Topic</u>	<u>Duration</u>	<u>Location</u>	<u>Enrolment</u>
Gas - Diesel	4 weeks	U. of S.	54
Welding (2 sessions)	2 "	"	77
Farm Building	1 "	"	40
Rural Electrification	1 "	"	20
Artificial Insemination	1 "	"	46
General Agriculture, Farm Mechanics, etc.	1 to 3 days	District Centres	2,967
Homemaking for Rural Women (8 courses)	2 weeks	U. of S.	469
			<u>3,673</u>

The following short courses are also provided by the Extension Department in co-operation with the Canadian Vocational Training Program:

<u>Topic</u>	<u>Duration</u>	<u>Location</u>	<u>Enrolment</u>
General Agriculture (12)	2 weeks	Rural	376
General Agriculture (2)	6 "	Prince Albert & Moose Jaw	73
Farm Mechanics (5)	2 days	Kindersley	71
Farm Mechanics & Farm Management (4)	2 days	Rural	79
			<u>599</u>

The practical agricultural short courses are open to farmers who are 16 years of age or over and who are not attending school. No charge is made. Sponsoring local organizations are required to provide a suitable hall or classroom, heat and light, and they must ensure an average daily attendance of at least 15 students. Instructors are practicing farmers who are graduates in agriculture.

Rural electrification short courses of one week each are designed for farmers. There is no tuition fee. Instruction is provided by a qualified electrician.

The Provincial Department of Agriculture: Through the Agricultural Representative Service a sizable program of Farm Management Clubs has been established.

Each club is comprised of 10 to 20 members and their wives.

Clubs are established in all Agricultural Representative districts in the province. In 1958, 23 clubs were organized with 350 members. In 1959, there will be approximately 50 clubs with 850 members.

The program is designed as a 4- or 5-year project with approximately six formal meetings per club each year combining the accounting and budgeting approach to farm management.

Subjects discussed by each club are studied under three major divisions:

- (1) Production Problems
- (2) Special Problems - income tax, estates, etc.
- (3) Farm Financial Management

The Department of Education: Under the C.V.T. program the Department of Education operated two training courses for farmers in 1957-58 at its premises in Saskatoon:

Farm Mechanics	2 Sessions	8 Weeks	48 Students
Rural Electrification	2 Sessions	2 Weeks	75 Students

Qualifications required of instructors for the farm mechanics courses are simply that they be "successful farmers". Instructors in the 1958-59 term were, in fact, graduates of the diploma course at the University of Saskatchewan.

Under its program of vocational education in agriculture for rural school units, the Department of Education, again with assistance from the Canadian Vocational Training program, co-operates with local co-ordinating committees in providing programs of short courses on a variety of agriculture topics for adult farmer study clubs at Kindersley, Kinistino, Sturgis and Rosetown. Agriculture instructors employed by the school units supervise organization of these clubs and arrange for conduct of the lessons. They themselves provide the instruction on basic agriculture topics but others with special training may be engaged to instruct in special fields such as welding, animal health, etc. Companion courses for farmers' wives are sometimes scheduled to give instruction in sewing or other household arts.

These training courses are presented as 20 hours of instruction, typically two hours per session, once a week, extending over a ten-week period. The clubs attracted a total of 610 members in 1957-58.

ALBERTA

Diploma Courses in Vocational Agriculture

Diploma courses in agriculture and home economics have been offered at the Schools of Agriculture in Alberta since 1913 when the first school was opened at Olds. A similar school opened at Vermilion the following year and in the early 1920's four more were established at other rural points. Two of these latter Schools closed after only two years operation and two more closed in 1931 due to lack of sufficient students. Residential accommodation for students was added at the Olds and Vermilion Schools in 1928 and except for minor interruptions these two schools have continued to function to the present time. A new school was opened at Fairview in the Peace River area in 1951 but a fire which destroyed a major part of the facilities led to its temporary closing in 1958.

The schools of agriculture are administered by the Provincial Department of Agriculture under the Superintendent of Agriculture Schools.

A Board of Agriculture Education acts in an advisory capacity "to aid in the co-ordination of agricultural education as provided in public schools, high schools, agricultural schools, the University and other institutions providing instruction in agriculture". This Board includes representation from the Provincial Department of Agriculture, the University Faculty of Agriculture, the Department of Education, the School Trustees' Association, the Association of Municipal Districts, the Federation of Agriculture, the Farm Women's Union, the Women's Institutes, the Agricultural Schools Alumni Association and two members-at-large appointed by the Minister. It meets once per year.

Courses Offered:

The basic course consists of two winter terms opening late in October and closing early in April. A two-in-one course for students with Grade XI or higher standing offers the essential elements of the two-year course in somewhat condensed and accelerated form, permitting graduation following one winter term.

Objectives:

- (1) To provide helpful training to young men who expect to earn their livelihood through agricultural production.
- (2) To stimulate higher standards of rural living.

The Course of Study:

The course content includes various subjects for which detailed outlines are approved by the Superintendent on the advice of principals and staff members. Annual staff conferences provide opportunities to review course outlines, timetabling arrangements and other matters of particular concern. There has been no provision for specialization.

Distribution of class time according to subjects is as follows:

	<u>Two-Year Course</u> (Per Cent)	<u>Two-in-One Course</u> (Per Cent)
Plant Sciences	22	25
Animal Sciences	22	25
Farm Mechanics	22	25
General	34	25

Generally, lecture-type lessons consisting of 40-minute periods are scheduled in the mornings and laboratory periods of one and a half or three hours are held in the afternoons.

Special series of lectures are usually given on irrigation, bee-keeping and veterinary medicine. Each year students are addressed by representatives from the University, the Extension Services and the experimental farms.

Facilities:

The schools are well equipped with residential accommodation for all students, a considerable number of staff family residences, classrooms, shops and laboratories. School farms of 300-500 acres are employed to provide demonstrations of recommended crop and livestock production practices. Originally these were "Provincial Demonstration Farms" and purebred livestock breeding centres, but they are now reserved for use as school farms on which the production of purebred livestock or registered seed is only incidental to instruction purposes. A feature of the farm management course, for example, is the study of the planned farming program on the school farm. Gross sales from the school farm amount to between \$15,000 and \$20,000 annually.

Staff:

A staff of ten instructors engage in the teaching of the agriculture students, which permits considerable specialization. Eighty per cent of these have University degrees and 40 per cent have teacher training. Instructors in academic subjects commonly do not have university degrees. Instructors in farm mechanics have training as agricultural engineers but assistants in related shopwork have certificates in industrial arts or practical experience only.

A recent policy provides for payment of up to 75 per cent of instructors' salaries while on leave of absence for approved training. Officials expect that this arrangement will encourage considerable up-grading of qualifications.

Additional staff duties include some teaching of home economics students, administrative responsibilities relating to the school farm, maintenance of the premises and supervision of student extra-curricular activities

Several staff members continue in service at the school throughout the year but the majority transfer to work with other Branches of the Department of Agriculture or return to private farming operations during the summer months.

Student Enrolment:

The following table provides enrolment data for recent years:

	<u>Olds</u>	<u>Vermilion</u>	<u>Fairview</u>
Normal Capacity	<u>120</u>	<u>120</u>	<u>80</u>
1948-49	132	127	not operating
1953-54	118	119	63
1957-58	89	63	47
1958-59	119	116	not operating

In the immediate post-war years a very considerable portion of the enrolment consisted of veterans receiving rehabilitation benefits. High employment conditions in 1954-57 attracted large numbers of farm youth to highly remunerative employment in other industries, but by 1958 the two schools were again filled to capacity.

Ninety-five per cent of the students are sons of bona fide farmers and the great majority are definitely committed to engaging in farming operations at home after attending the course.

Each year several students, usually from the two-in-one classes, decide to go on to degree courses in agriculture. During the years 1954-58 inclusive, 40 graduates from the Schools of Agriculture enrolled in the Faculty of Agriculture at the University of Alberta.

Girls are not excluded from enrolment for agriculture but they are encouraged to enroll in the home economics course which is specially designed for girls from rural homes. A maximum of three girls have enrolled for agriculture courses in any recent year.

Enrolment lists generally include a few students from Saskatchewan and British Columbia as well as one or two from foreign countries.

Entrance Requirements:

Students must be 17 years of age and have Grade IX standing for admission to the regular two-year course but older students are given special consideration. These regulations have been subject to upward revision in recent years and officials report marked improvement in the quality of student ability and interest.

The two-in-one course requires full Grade XI with "B" (50 per cent) standing or better, and students may be admitted at 16 years of age.

Proof of adequate farm experience may be required of two-in-one students.

Current classes average 18-19 years of age and have about Grade XI standing.

Costs:

Tuition for Alberta residents is free but fees of \$50.00 are charged to non-residents. Board and room is charged at \$40.00 per month. Other fees and expenses for materials and supplies amount to \$65.00. Transportation costs are refunded to Alberta students travelling from considerable distances under special circumstances.

Scholarships, Bursaries and Prizes: Amount to approximately \$1,000 at each school.

Home Projects: are not required.

School Farm Duty: is not required except for teaching purposes or observation of farm practices.

Student Achievement: is based on term work and formal examinations. The general policy is for term work to account for at least 50 per cent of the final standing in each subject.

Accreditation: The Alberta Department of Education will grant up to 20-23 credits* in the elective category towards a high school diploma for each year of the course successfully completed.

Graduates from Schools of Agriculture are admitted to the Faculty of Agriculture at the University of Alberta without Grade XII English and Social Studies which are normally required.

Advertising and Publicity: Little by way of direct advertising is done. Departmental announcements, promotion by district agriculturists, contacts with 4-H Club members and support by former students account for most of the attendance. Press releases and news reports of special functions such as the Little Royal, graduation exercises and summer short course programs also help to make the farming public aware of the schools' services. A regular weekly radio program originating at one of the schools has been credited with being particularly effective in 1958.

Some direct contact is made with high schools, particularly through guidance officers and "careers" programs.

* 35-40 credits per year comprise a full high school program.

Trends and Problems:

The Schools are faced with the problem of maintaining enrolment for training in the vocation of farming. The very considerable adverse publicity regarding the economic condition of farmers is undoubtedly effective in discouraging many farm youths from a career in farming. In addition, attractive employment conditions in other industries offer strong competition for older farm boys who are able to get away from their farm homes for the winter months.

There is an apparent demand for opportunities to achieve high school graduation. For this reason authorities are studying the possibility of making a limited number of the required senior high school subjects available to students while enrolled in vocational agriculture courses. This problem is receiving the attention of a liaison sub-committee of the Board of Agricultural Education, appointed by the Minister to review matters pertaining to agricultural education at all levels. It includes representatives from the Faculty of Agriculture and the School of Home Economics, University of Alberta, the Department of Education and the Department of Agriculture. Current discussions also centre on the possibility of offering more variety in the courses at the Schools of Agriculture including some provisions for specialization in particular fields of agriculture. Farm management has, here as elsewhere, received considerable increases in timetable allocations in recent years.

There is a very limited supply of capable instructors possessing adequate farm experience, professional training in specialized fields and teacher training, who are interested in employment as instructors at the vocational level. This applies particularly to those in the fields of agricultural engineering and shopwork.

Provisions to enable instructors to keep in touch with current conditions and developments in rural areas as well as with sources of new discoveries and recommendations, though recognized as a necessity, are generally difficult to implement.

With the exception of the farm mechanics buildings acquired in 1945-48, no major additions nor replacements have been made to the facilities of the older schools since the 1920's.

Agriculture Education in The High Schools

The Program of Study for Alberta high schools provides for the teaching of agriculture as an "elective" subject in Grades IX, X, XI, and XII.

In Grade IX, this subject may be offered on the basis of three or four 35-minute periods per week. Its objective is exploratory only and no particular certification in agriculture is required of the teachers. Typically Grade IX agriculture is taught only in rural schools where the Superintendent has given his approval based on student interest and personal qualifications of the teachers.

In Grades X, XI and XII credits are based on the number of 35-minute periods per week. 35-40 credits comprise one full year's program. Agriculture 10 carries 4 or 5 credits; the subject matter is general and broad in scope. Permission to offer this subject at a school is dependent on the Superintendent's approval of the teacher's qualifications.

In Grades XI and XII agriculture may be offered as either a vocational or a general subject. When given as a vocational subject more time is allocated and teachers must hold degrees in agriculture. Designations are: Agriculture 20 (vocational)-eight to ten credits; Agriculture 21 (general) - four to five credits; Agriculture 30 (vocational) - ten to fifteen credits.

Enrolment figures for agriculture subjects in recent years have been as follows:

	1955-56		1956-57		1957-58	
	Boys	Girls	Boys	Girls	Boys	Girls
Grade IX Agriculture	443	405	452	361	510	374
Agriculture 10	288	180	263	111	239	101
Agriculture 20	21	11	20	--	29	--
Agriculture 21	5	6	7	1	21	1
Agriculture 30	4	-	1	--	3	--

The total enrolment of students in these years in Grades IX, X, XI, and XII has been approximately 18,000; 16,000; 13,000 and 10,000 respectively.

In the 1957-58 term 62 schools were teaching Grade IX Agriculture; 22, Agriculture 10; five, Agriculture 20 and two, Agriculture 30. In schools where Agriculture 20 was being offered approximately 12 per cent of the Grade XI students elected to enroll in it. In 1958-59, 20 schools were offering Agriculture 10; 3 schools, Agriculture 20; five schools, Agriculture 21 and one school, Agriculture 30.

Course Content:

Course outlines have been prepared for the guidance of Grade IX agriculture teachers but teachers in higher grades are responsible for developing and organizing the subject matter themselves.

Agriculture mechanics is not specially provided for but most schools have industrial arts programs which include motor mechanics, metalwork and woodwork.

Home Farm Projects: are not required in Grade IX but are usually included in courses planned for higher grades. District school boards have been encouraged to provide somewhat lighter classroom loads for agriculture teachers so that farm visits can be made. At one high school the instructor is paid one month's extra salary and mileage at 12 cents to provide for supervision of home farm projects. Each student is visited 8-10 times per year. Officials report such visits as highly successful in establishing desirable liaison between the parents and the high school.

Evaluation: Evaluation and grading of student achievement is entirely the responsibility of the local teacher.

Facilities: No special facilities for the teaching of agriculture in high schools are required by the Department of Education. Generally, a specially designated lecture-laboratory classroom is provided and some schools have a greenhouse. Tours and inspection visits are made to local farms to provide field studies and practical examples of successful farm practices.

Short Courses, Study Groups and Clubs

In recent years the trend in short course programs has been towards specialized topics with a sequence of lessons and including considerable student participation. Examples of short courses or other training programs for farmers conducted in 1957-58 are as follows:

(1) Course in Agricultural Mechanics:

Duration: Two winter terms of five months each.

Location: At the Provincial Institute of Technology, Calgary.

Objective: To train young farmers to select wisely and maintain their tractors, farm machinery and buildings.

Course Content: Out of a total of 1200 hours instruction time, allocations to various subjects are:

<u>Subject</u>	<u>Hours</u>
Farm Tractors (theory and shopwork)	635
Building Construction and Concrete Work	216
Welding (gas and arc)	165
Farm Machinery	84
Chemistry and Physics	80
Business Knowledge	20

Facilities: Well equipped shops and classrooms are available for all phases of the instruction program.

Staff: Organization and development of the subject matter, shopwork exercises and procedures are supervised and conducted by qualified agricultural engineers with teacher training, assisted by experienced tradesmen most of whom hold journeymen's papers.

Enrolment: In general, students in the first year of the course number about 40, and 20 to 30 return for the second year. They are almost all farm youths 18 to 25 years of age. Approximately 60 per cent return to farm operations after completing the course while the remainder generally find employment relating to the training received, particularly in shops or agencies servicing farm machinery.

Trends: Some consideration is being given to developing a diesel engine course which would attract those seeking related employment, and gearing the agricultural mechanics course to the needs of those who plan to return to farm work.

Costs: Board and room accommodation is not provided. Fees amounting to \$66.00 are charged for each term of the course.

(2) The Schools of Agriculture conduct a series of short courses during July of each year at which members of the staff with assistance from extension service personnel provide the instruction. Tuition is free. Board and room charges amount to \$1.50 per day for young people and \$4.50 per day for adults. Many of those attending are sponsored by various local or farmer organizations. In 1957 the following programs were offered:

<u>Title</u>	<u>No. of Centres</u>	<u>Duration (days)</u>	<u>Total Attendance</u>
Farm Women's Week	3	4	200
Boys' and Girls' Fair Camp	1	6	120
4-H Club Week	4	6	460
W.I. Girls' Club Week	1	5	180

(3) Agricultural Engineering "Schools"

Series of short courses or schools have met popular response at rural centres. Frequently local Agricultural Societies or other organizations sponsor a school by making arrangements for facilities and encouraging enrolment. The Department of Agriculture provides qualified instructors, usually agricultural engineers or experienced tradesmen. Tuition is free but, principally to insure sincerity of pre-enrolments, a \$5.00 registration fee is charged for the welding schools.

Schools held in 1957 were:

	<u>Duration</u>	<u>No. of Centres</u>	<u>Enrolment</u>
Rural Electrification	1 week	17	677
Farm Welding	1 week	17	500
Rural Plumbing	2 days	12	700

(4) Farm Young Peoples' Week - University of Alberta

This course, held in June of each year, attracts older boys and girls from all over Alberta. 50 per cent of the program consists of specifically agriculture subjects with Faculty of Agriculture and other technical personnel serving as instructors. The balance of the program is designed to meet citizenship training objectives. The enrolment in 1958 was 113 boys and 50 girls, of whom about 80 per cent were sponsored by farm organizations, notably The Alberta Wheat Pool, The United Grain Growers and the Farmers Union of Alberta. Residential accommodation at the University costs \$28.00 for the nine-day period.

(5) Farm Leadership Training Courses - Banff School of Fine Arts

Two two-week courses feature a program of speakers, study groups and workshops in the general field of community organization and rural sociology. Twenty-one young men and eleven women attended in 1958. All were sponsored for travelling and living expenses by farmer organizations and Women's Institutes.

(6) Farm and Home Development Programs

Promotion and support for this approach to agricultural extension work is a relatively recent one but has attracted considerable popular support by farm families who are interested in examining their farm businesses through group discussions and study projects. Assistance by district agriculturists and subject matter specialists is made available as needed.

In 1957, the 67 groups participating in this program held 230 meetings, tours, and field days with an aggregate attendance of 7,461. Groups conducted studies of farm accounts and records, farm business analyses and other phases of farm management.

Agricultural Extension

In addition to the programs outlined above, the following data have been gathered from 1957-58 reports to indicate the nature and scope of provisions in effect to assist the farm public in keeping informed and up-to-date in the operation of their farm businesses:

The Provincial Department of Agriculture employs 43 District Agriculturists, 8 Assistant District Agriculturists, 6 Irrigation Specialists and some 30 other subject matter Specialists. A very considerable part of the duties of this staff is to work with groups of farmers or individuals with the basic objective of agricultural improvement.

Forty-five Agricultural Societies participated in the following activities:

- 6 "B" Class Agricultural Fairs
- 22 "C" Class Agricultural Fairs
- 3 Livestock Sales
- 3 Seed Fairs
- 4 Horticultural Exhibitions
- 22 Farm and Home Improvement Programs
- 1 Dairy Field Day

213,385 Agricultural publications were distributed.

266 films were shown to 17,129 persons at 361 meetings.

Irrigation specialists participated in 15 extension meetings, made 672 farm visits and had 1,283 office interviews with farmers.

Agricultural engineers addressed 38 meetings and short courses attended by 2,690 persons, and held 39 Field Days and Demonstrations attended by 2,275.

The Provincial Livestock Branch reports 60 special livestock improvement projects; its speakers addressed 248 farmers' meetings and short courses. 774 herds or flocks were culled or selected and 1,007 farmers were assisted with registration of pure bred animals.

The Radio and Information Branch prepares a daily 10-minute farm broadcast which is presented over seven stations. It prepared 70 issues of "Science and the Land" which reports results and progress of scientific investigation at agricultural research stations as it affects the farmer. A weekly publication, "Farm Notes" has a mailing list of 750 including radio and T.V. stations, newspapers, magazines, officials of federal and provincial governments, libraries and commercial companies.

Feeder's Day at the University Farm attracted over 1,500 persons, Field Crops Day 250, and a Soils and Fertilizers Field Day at Breton, 250 persons. 17 staff members at the University reported giving 143 lectures or demonstrations to farmer audiences where the total attendance was 26,190 persons. They also participated in 16 radio or television programs.

BRITISH COLUMBIA

Diploma Course in Vocational Agriculture

The Faculty of Agriculture at the University of British Columbia offers an "Occupational Course for Young Farmers."

Young men or women who are interested in a career in farming, and who may not wish to proceed toward a degree, may enrol in a course leading to a Diploma in Agriculture. This course was first offered in 1925 and has attracted from 6 to 22 students per year since that time. Eight students are enrolled for this course in the 1958-59 term.

Because there are insufficient numbers to justify separate classes, students in this course do not form a segregated group but sit in with regular degree course students for such classes as they elect to study.

A wide choice is open to the student who wishes to enter the occupational course. In consultation with the Dean and heads of departments he may elect courses to meet his individual requirements from among the following subject fields:

Agricultural Economics	Agronomy
Agricultural Mechanics	Horticulture
Animal Husbandry	Poultry Science
Dairying	Soil Science

The course is offered during the regular winter session. Thus, in addition to his classes in agriculture, the occupational student is able to participate in a variety of activities associated with life on the campus of a university, such as sports, social activities, special lectures and concerts. Tuition fees amount to a total of \$156.00.

If at the end of his course the student elects to proceed further in agriculture, credit towards a degree will be granted for those subjects in which satisfactory grades have been obtained, provided high school graduation (University Program) requirements have been met.

The diploma is awarded to candidates who obtain passing marks in at least 15 units of course work, which is approximately equivalent to one year's work in the degree course. However, the course need not be completed in one year.

Students who have taken this course have usually lacked university entrance requirements but have been anxious to secure further education in agriculture usually in a specific field.

The Youth Training Course in Agriculture

Since 1941 the Extension Department of the University of British Columbia has conducted an annual eight-week course in January and February

for rural youth 16-30 years of age, in which training in agriculture is one of the programs offered. Other programs are Forestry, Fisheries and Home Economics.

Students enrolling for this course are generally sponsored by some organization in their local community such as a service club or Farmers' Institute. They are nearly all farmers' sons or have had some considerable experience in farming.

Objectives:

The main objective of these courses is to provide practical occupational training in agriculture. Secondary objectives are to provide leadership training and opportunities for personal development, and to acquaint students with facilities for life-long learning.

Course of Study:

The program of classes provides for approximately 50 per cent instruction time in specifically agriculture subject matter while the balance is devoted to general and social development subjects and shop work in carpentry, motors, and welding. In recent years students have been given the opportunity to specialize in poultry husbandry, animal husbandry or horticulture, but all of the 18 students enrolled for the 1958-59 term chose the animal husbandry. Other agriculture subjects included in the course are farm management, soils, crops and mechanics.

Facilities:

The youth training classes occupy a self-contained unit adjacent to the University campus. It includes a student residence, lecture rooms, shops and recreational hall. Students take turns in assisting with housekeeping and meal serving duties. Facilities of the University are at the disposal of the Youth Training Program.

Staff:

Members of the staff of the Department of Extension and other Departments at the University provide most of the instruction but subject matter specialists from the Federal and Provincial Departments of Agriculture and other agencies contribute to the program of lessons.

Student Enrolment (including Agriculture, Fisheries & Forestry):

<u>1948-49</u>	<u>1953-54</u>	<u>1957-58</u>	<u>1958-59</u>
92	42	72	55

The 1958-59 class averages 18-19 years of age and has about Grade X standing. Of the whole group of Youth Training Students, seven are Indians whose full expenses are paid by the Department of Indian Affairs.

Examinations, tests and quizzes are used only for motivation and as a teaching technique. Diplomas are not awarded and the course carries no accreditation toward either high school or University standing.

Costs:

The total cost to the student for tuition, board and room and transportation, amounts to \$35.00. The balance is paid through allotments under the federal-provincial training agreements.

Agriculture Education in High Schools

Agriculture has been included as a subject in the high school program of British Columbia for some years. During this time it has attracted considerable study and has been granted a special flexibility in arrangements at various schools. Introductory courses in general agriculture are offered in Grade VIII and IX at some schools. Regulations currently in effect provide for vocational agriculture in Grades X, XI and XII. Agriculture mechanics is generally associated with it as a companion course in the same grades. Both subjects are in the elective category. Registration for these subjects generally precludes enrolment for at least one subject required for matriculation.

Credit allocations vary according to minutes of instruction per week but a minimum arrangement allows six credits for agriculture and four for agricultural mechanics plus five credits in related science, out of a possible 35 credits for a full one-year program. Students who take these two subjects plus at least one related subject such as mathematics or science are considered to be enrolled in vocational agriculture for purposes of qualifying their school for vocational training grants. In some schools general shop is offered in lieu of farm mechanics. Although agriculture or agriculture mechanics was being taught at some 14 centres in the 1958-59 term, only three schools qualified for this grant.

Enrolment:

The largest enrolment in the agriculture program was at Chilliwack with 16 Grade X students, eight in Grade XI, and seven in Grade XII. An indication of the trend in enrolment for the province as a whole may be seen in the following table:

Student Enrolment in Agriculture Classes

Year	Pre-Vocational Agriculture			Vocational Agriculture				Farm Mechanics				Grand Totals	No. of Centres
	Grade VIII	IX	Total	Grade X	XI	XII	Total	Grade X	XI	XII	Total		
1953-54		355	355	351	119	38	598	163	99	47	309	1172	19
1957-58	96	485	581	220	116	72	408	121	83	27	231	1220	15
1958-59	352	273	625	231	119	69	419	100	82	30	212	1256	14

In addition to the vocational agriculture courses in Grades X, XI, and XII, a number of schools offer a course in agriculture based on these. While not intended to be vocational, the emphasis is on the practical aspects, and some vocational value results.

Course of Study:

Subject matter covering the broad range of agriculture is presented on a grade basis whereby most topics are included in the Grade X program and then elaborated in more detail in succeeding grades. In addition to the material covered in agriculture and agriculture mechanics at the school, students are required to conduct approved home farm projects. At Chilliwack official gradings are based only on class work but the home farm projects and reports on them must be conducted in a manner satisfactory to the instructor. These projects usually are crop or livestock production enterprises, frequently involving a considerable investment for which a bank loan may be required. In his first year (Grade X) a student might be expected to sell produce with a gross value of \$200-300. In their third year, students have developed enterprises to the extent of 250 turkeys, six dairy cows or eight brood sows.

"Future Farmers of Canada" clubs modelled after the F.F.A. Clubs in the United States have been organized by vocational agriculture teachers as a means of furthering their objectives in developing interest and experience in rural citizenship and community organization. Members of their classes are encouraged to belong to these clubs but are not required to do so. At Chilliwack there are 50 boys in the F.F.C. Club, some of whom are high school students not enrolled in the agriculture classes and some not attending high school at all.

Facilities:

Special facilities required for the conduct of the vocational agriculture program include a farm mechanics shop together with equipment and storage space. A greenhouse, hot bed or other arrangement for growing plants and seedlings is usually available.

Staff:

Instructors are required to have had considerable practical farm experience, a degree in agriculture, and teacher training. Special training and refresher courses in agricultural mechanics have been provided at the University of British Columbia during summer months for teachers of vocational agriculture. Vocational agriculture teachers are paid according to established schedules with additional allowances for extra time given to supervising home projects, club work, night classes or School Fairs. At Chilliwack the two teachers receive an extra two months salary each as well as 10 cents per mile for rural travel.

The distinct decline in enrolment for the agriculture classes evident over recent years is attributed in part to elimination of agriculture from the program in Grades VIII and IX at some schools. However the main

reason is that many students and some schools have been dropped from the Vocational Agriculture approved list because they did not wish to carry out the type of program specified for vocational agriculture in high schools.

Because so few students are taking the agriculture classes, teachers specially qualified to teach agriculture are being assigned other subjects in the high school program.

Short Courses, Study Groups and Clubs

The Federal and Provincial Departments of Agriculture, the University of British Columbia as well as several district high schools where agriculture is being taught, various commercial companies and Livestock Breeders' Organizations all contribute assistance and specially qualified personnel to participate in farmers' meetings, agricultural short courses and demonstrations.

Examples of some of the more formally organized programs conducted in 1958 are:

- (1) Night school classes provide a program of 20 two-hour lessons at high schools where vocational agriculture is being taught. In 1958-59, agriculture economics is being given at Armstrong and farm mechanics at Chilliwack.
- (2) Poultry short course - three days - 250 attended and paid a \$3.00 registration fee to hear authoritative speakers on current developments in the industry.
- (3) Six one-afternoon-and-evening meetings were sponsored by local poultry producers.
- (4) A twelve-week series of meetings sponsored by a district Co-operative Association one evening a week featured a variety of agriculture subjects.
- (5) One-day short courses on farm management attracted 145 persons at 4 centres.
- (6) A Farm Forum leaders' workshop was held at the University: attendance, 20.
- (7) Dairy herd management short courses were held at 10 centres for one afternoon and evening each. Total attendance was 300.
- (8) A refresher course in farm machinery and welding for teachers of vocational agriculture was held at the University - two weeks - 108 hours of instruction.
- (9) Night school class in farm mechanics at a district high school - one evening a week - 20 weeks - 17 farmers enrolled.
- (10) A "Chautauqua" program included a speaker and displays on tree fruits. It visited 10 centres and attracted 1,611 persons.

- (11) A welding supplies firm conducted two-day welding schools at a number of district points.
- (12) Two-day tractor maintenance courses were held at five centres - average attendance was 16 and usually included students from agriculture classes at the local high school.

Other organized programs and activities that provided instruction and information to the farm public in 1958 included:

The day-to-day work of 17 district horticulturists located at district points and 19 district agriculturists with three supervisors and two assistants, as well as a number of subject matter specialists of the Provincial Department of Agriculture. As an indication of the scope of their work for one year, six district agriculturist offices reported:

- 3,580 Farm visits
- 3,639 Office visitors
- 297 Meetings
- 62 Field Days
- 5,240 Bulletins distributed
- 65 Press releases
- 52 Radio broadcasts

A weekly television program conducted by a district horticulturist was started in April and has proven very popular.

Agriculture Field Days at the University attracted 225 persons.

Fruit and vegetable judging competitions were organized by district horticulturists and attracted junior competitors from vocational agriculture classes trained by their teachers.

Pilot Farm studies in farm management and supervised accounting are in their third year and currently have 42 farms included in the scheme.

"A Planned Farming Program for the Fraser Valley" attracted large audiences to see the displays and to hear speakers explain the recommendations being made.

Two workshops for dealers and salesmen detailed up-to-date recommendations respecting seeds, feeds and fertilizers and other farm supplies.

The Provincial Department of Agriculture reports participation in a total of 1,129 meetings with a gross attendance of 27,479 persons.

A P P E N D I X

(1)

THE NEED FOR IMPROVED VOCATIONAL EDUCATION IN AGRICULTURE

(Extracts from a Statement made to the National Vocational Training Advisory Council by J. A. Ferguson Representing the Canadian Federation of Agriculture, September 24, 1957.)

The business of operating a farm in this modern day requires, if the job is to be done well, a broad range of skills and knowledge. The skills and knowledge needed to manage soils, grow crops, raise and care for livestock, operate and maintain machinery, and store and prepare products for market are highly practical, yet at the same time can be best, and perhaps only, understood and acquired through instruction to some degree in the scientific and mechanical principles involved. If it were not that the farmer normally receives, at home, a long and practical training in farming as he grows up, we would simply not be getting along at all with the training now provided for farmers.

The instruction obtained through being raised on a farm is, moreover, becoming increasingly inadequate as a result of the scientific and technical advances which in the last 20 years have created a revolution in agriculture in this country. Vocational training in agriculture today must go beyond instruction in practical skills, important though these are, but must also teach the principles underlying plant breeding, soil, science, nutrition, the chemistry of weed killers and insecticides and so on.

The need for more vocational training in agriculture is very clearly great, and working out the best ways of providing it is a complex problem for which there is no simple answer.

The Canadian Federation of Agriculture believes that we should have a goal, for every farm man and woman, of providing a minimum of Grade X academic schooling, plus at least two years vocational education.

(2)

OBJECTIVES OF THE SCHOOLS OF AGRICULTURE IN ALBERTA

"For Our Farmers of To-morrow"

High school students, particularly those in rural areas, should be well informed about the vocational training opportunities offered by the Schools of Agriculture located at Olds, Vermilion, and Fairview.

A considerable amount of "lip service" has been given to agriculture as our greatest and most basic industry. In spite of the interest in and the importance of other industries developing in our midst it must be quite obvious to all that agriculture is undergoing tremendous changes itself. The farmer's status in the economic and social scheme of things has improved beyond his fondest dreams of only a few years ago. We need only mention transportation, rural electrification and mechanization to draw attention to our need for a new concept of the life and life-work of a farmer. Does it not follow, then, that we must also adopt a new concept of the farmer's educational requirements and thus, that the possibility of specific vocational training in agriculture be given primary consideration for every male high school student who has a background of farm experience?

Boys who have been raised on a farm and whose family as established farmers can provide the means of them becoming established in the farming business should give first consideration to farming as their vocation. They have advantages not available to thousands of other young people who look upon the life of a farmer as most desirable. They see farmers as business men engaging in free enterprises -- "their own bosses" -- living a life out-of-doors; working with living plants and animals for the production of food and other essential human needs. Business ability in a competitive economy and a knowledge of a wide variety of practical information and skills command respect for the farmer's means of earning a living and place an ever-increasing premium on his education and training.

The course of the Schools of Agriculture is designed to meet the needs of older boys who have decided that, for them, farming is the best choice of a vocation. It must be emphasized, however, that this course should not be considered a replacement for a high school education. It is, rather, supplementary to whatever high school training they can or do obtain. Indeed, the "Two-In-One" course at the Schools of Agriculture is specially designed for the high school graduate. But in any case, and whatever the grade standing obtained, some specific training in practical agriculture would seem to be an essential part of the educational program of those who are going to devote the major part of their life to living and earning a living on a farm. For those who are considering going on to further study in agriculture at the university a term at the School of Agriculture bridges the gap between high school and university very nicely and provides some insight to the fields of study that constitute a university course.

(3)

LIST OF HOME FARM PROJECTS SUGGESTED TO TEACHERS OF AGRICULTURAL SCIENCE
AND AGRICULTURE IN ONTARIO.

Projects should be chosen early in the school year. Every effort should be made to visit homes during the summer months.

Livestock:

1. Membership and activity in a Foal, Swine or Calf Club.
2. Raise two or more pigs or lambs from weaning to market age.
3. Raise a beef or dairy calf.
4. Keep a record of the cost of feeding pigs.
5. Keep a record of the milk production of one or more cows during the lactation period.
6. Prepare a chart or graph showing livestock prices over a period of years.

Poultry:

1. Hatching and rearing of baby chicks.
2. Feeding and management of chicks to laying age.
3. Feeding and management of the laying flock.
4. Raising of birds for meat.
5. Keep a record of the egg production.

Field Crops:

1. Growing plots of farm crops; school supply seed of new varieties of crops, grains, potatoes, roots, soybeans, onions, tobacco.
2. Membership in a Grain or Potato Club.
3. Grow registered or certified seed.
4. Grow seed of mangels, turnips, onions, carrots, radishes.
5. Show value of D.D.T. in control of insects.

Soils and Fertilizers:

1. Show value of commercial fertilizer on some farm crop.
2. Show value of commercial fertilizer on the permanent pasture.
3. Compare fall and spring plowing.
4. Demonstration of contour plowing and strip cropping to control erosion.

Fruit Growing and Gardening:

1. Management of the home garden.
2. Set out and manage plot of raspberries, strawberries or asparagus.
3. Prune, spray and fertilize one or more fruit trees.
4. Propagation of small fruits and shrubs by cuttings.
5. Operation of a hot bed or cold frame.
6. Grow plot of perennials from seed.

Miscellaneous:

1. Improvement of home grounds - lawn, flowers, shrubs, trees, walks, fence.
2. Remodel and repair some farm building - poultry house, hog house.
3. Equip a farm workshop.
4. Repair, paint and put in working condition a piece of farm machinery.
5. Plant suitable windbreaks.
6. Paint farm implements.
7. Prepare suitable charts for classroom use.
8. Collect and mount at least 30 weeds.
9. Collect and mount the seeds of at least 30 weeds.
10. Collect and mount at least 100 different insects.
11. Show value of 2-4-D in controlling weeds in the lawn.
12. Canning fruit.

(4)

EXTRACT FROM REGULATIONS GOVERNING
4-H BEEF CALF CLUBS IN ALBERTA, 1959

CLUB ORGANIZATION

1) The organization of a Beef Calf Club should comprise:

- a) An EXECUTIVE consisting of: President, Vice-President, Secretary-Treasurer, Club Reporter.

The Executive should be elected from the membership at the organizational or reorganizational meeting. No member should hold the same office for two consecutive years.

- b) An ADVISORY COMMITTEE consisting of: Three interested adults.

The Advisory Committee should be carefully selected by the Club and the District Agriculturist.

- c) A CLUB LEADER, who should be designated from the members of the Advisory Committee and approved by the District Agriculturist.

- d) An ASSISTANT CLUB LEADER, also to be selected from the Advisory Committee.

- e) A PURCHASING COMMITTEE (when calves are to be purchased) consisting of:

The District Agriculturist

The Club Leader

A third member selected by these two.

2) Duties of the Executive:-

- (a) To conduct the general affairs and business of the Club.
- (b) To arrange and conduct Club meetings.
- (c) To arrange and execute under the guidance and supervision of the District Agriculturist and Advisory Committee: Achievement Days, Field Days, Rallies, Secondary Projects undertakings.

Duties of the Advisory Committee

- (a) To guide and assist the Club executive when necessary in the general conduct of the Club.
- (b) To assist the District Agriculturist in detailed supervision by visiting members, discussing their problems and generally stimulating interest and enthusiasm.
- (c) To take an active part and to guide the executive in the organization of all club functions and undertakings.

Duties of the Purchasing Committee

- (a) To approve or reject calves selected by Club Members.
- (b) To purchase and distribute by lottery, calves for members who require them.

4-H BEEF FEEDING CLUBS

Two projects are available in 4-H Beef Feeding Clubs. These are:

- (1) Single Animal Feeding Project. A project in which a member feeds and cares for one beef calf. The animal is exhibited on Achievement Day and later sold by public auction.
- (2) Multiple Animal Feeding Project. A project in which a member feeds and cares for five beef calves. The animals are exhibited on Achievement Day and later sold.

These projects may be carried individually or combined within the same club.

The multiple animal feeding project is a senior project in 4-H beef clubs and is reserved for members who are at least 15 years of age as of January 1st of the year in which the project is to be completed. It is desirable that members have at least two years experience in the single-animal feeding project before carrying the multiple animal feeding project.

(5)

EXTRACT FROM A BROCHURE ON 4-H CLUBS IN
NOVA SCOTIA

The Four H's

The four "H's" stand for Head, Heart, Hands and Health. These are the tools 4-H Club members need to carry out their activities to the best of their abilities.

In Nova Scotia

Junior club work was first started in Nova Scotia in 1922 when swine and heifer clubs were organized in Antigonish County by the Federal and Provincial Departments of Agriculture which co-operated in this project. When the Agricultural Representative service was started on a provincial scale in 1926, club work was brought under the direction of the Extension Services Branch. Since that time the program has become so popular with the rural youth of Nova Scotia that it has grown to the place where there are more than 600 active clubs with a membership of over 8,000.

Membership

For Agricultural Projects: - Ten rural young people between the ages of 10 and 20 years;

For Homemaking Projects: - Eight girls between the ages of 10 and 20 years inclusive.

1. If the club conducts more than one project, it is necessary that there be not less than five members in each project.
2. A club leader is a must. This should be some person in the community who is interested in the development of young people.
3. Rules and regulations governing any particular project are given in each project outline.

4-H Club Projects

The following projects are available to 4-H Clubs: Dairy, Beef, Swine, Poultry, Sheep, Garden, Forestry, Potato, Grain, Small Fruit, Food, Clothing. Others may be added whenever the need arises.

Every member in a 4-H club must have a project and the project must be the property of the club member. The responsibility for the development of the project lies entirely with the member. Any revenue received from the sale of produce, therefore, belongs to the member. The practical training and information received in completing a project is one of the most important parts of 4-H club work. This has brought about greater interest in the farm and in the farm home. Many father-and-son agreements, today, are the result of greater interest on the part of both father and son in carrying 4-H projects through to completion.

(6)

CANADIAN COUNCIL ON 4-H CLUBS - PROJECT ENROLMENT, 1958

PROJECT	B.C.		ALTA.		SASK.		MAN.		ONT.	
	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.
Home Economics										
Clothing	34	469	78	977	84	1,243	213	3,370	435	3,695
Food			15	160	35	482	17	172	450	4,226
Garden	16	206	47	551	88	1,292	79	940	118	801
Home Decorating			3	37	6	76				
Handicrafts					2	50				
Others	1	8			11	149			272	2,514
Livestock										
Dairy Calf	40	483	46	738	21	280	24	265	157	3,009
Beef Cattle	28	358	161	2,699	301	4,677	135	1,908	83	1,251
Mixed Calf	21	139					22	165	86	1,635
Swine	5	66	6	94	20	253	21	281	55	774
Poultry	8	105	2	31	9	112	11	107	18	289
Sheep	12	143	2	28	3	44	3	45	5	71
Field Crops										
Grain	2	24	91	1,314	199	2,890	59	742	83	1,239
Corn							1	13	51	806
Potatoes	1	13	3	48	11	117	22	256	72	1,177
Tractor	2	23			3	31	9	115	47	763
Farm Forestry					4	110			24	479
Others	20	349	3	36	2	20	21	324	14	212
TOTALS	190	2,386	457	6,713	799	11,826	637	8,703	1,970	22,941
AVERAGE	13.3		-		13.8		14		15	

Average Age — 14.1

Average number of members per club — 14.5

(6)

CANADIAN COUNCIL ON 4-H CLUBS - PROJECT ENROLMENT, 1958 Cont'd.

QUE.		N.B.		N.S.		P.E.I.		NFLD.		Totals For Canada	
Cl.	Mem.	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.	Cl.	Mem.
		36	524	227	3,394	84	978		190	1,191	14,840
				7	104	2	30		269	526	5,443
36	1,227	35	988	109	1,676	3	46		94	531	7,821
10	364			20	328					19	477
										22	378
									166	284	2,837
								31*		31*	
207	5,341	41	946	46	713	19	295			601	12,070
3	51	7	156	14	313	2	30			734	11,443
		12	332	8	123	18	434			167	2,828
4	100			1	24					112	1,592
8	284	7	124	3	49					66	1,065
3	40	1	13							29	384
15	335	4	53							453	6,597
										52	819
16	396			4	69	1	12			130	2,088
										61	932
				1	23				54	29	666
13	523			3	44	4	93			80	1,601
315	8,625	143	3,136	443	6,860	133	1,918	31	773	5,118	73,881
13.7		13.5		13		14		-			

*Club Membership open to more than one project.

No. of girls — 38,067 In 1957—

No. of boys — 35,814

Clubs — 5,092

Membership — 73,483

(7)

SAMPLE PROGRAM

NIGHT SCHOOL CLASSES AT A BRITISH COLUMBIA DISTRICT HIGH SCHOOL

"Farming for Profit in the North Okanagan"

Weekly Meetings 8 pm to 10 pm

Armstrong High School Lunch Room

OUTLINE OF COURSE

October	27th	How Valuable is a Farmer's Time?
November	3rd	Practical Problems in Operating Farm Machinery.
November	10th	How can the Farmer Use Published Agricultural Information?
November	17th	Electricity on the Farm.
November	24th	Federal Livestock Policies and Recommended Breeding Plans.
December	1st	Farm Workshop Equipment.
December	8th	How B.C. Government Policies Affect the North Okanagan.
December	15th	Special Christmas Meeting - Farming in the Early Days in the Armstrong Area.
January	5th	Some Legal Problems on the Farm.
January	12th	Planning Farm Finances for Better Management.
January	19th	Growing Quality Grain in the Armstrong Area.
January	26th	What's New in Hog Housing and Equipment? .

If interest is maintained, the Course may be extended for four further meetings during February.

Fee for the Course \$5.00, payable at the first meeting.

Course organised by Armstrong Board of School Trustees, with the assistance of the B.C. Department of Agriculture, the Canada Department of Agriculture, and the University of B.C. General arrangements under direction of D. R. Stubbs, J.C. Ryder and J. D. Hazlette.

There will be different speakers at each meeting - come prepared to discuss the points raised and to apply some of the ideas to your own farm.

(8)

TRENDS TOWARD FARM BUSINESS MANAGEMENT STUDIES

(Extracts from the National Farm Radio Guide Dec. 8, 1958)

The Need for Study:

Every farmer has "big business" decisions to make every day of the year. He probably considers all of these things in the course of a week:

1. Changing the volume of output
2. Marketing for a better price
3. Cutting down on unnecessary buying
4. Buying co-operatively and sharing lower prices.

These economies and changes are a part of good management. Lacking these tools of business, a farmer may have little chance.

But the management ability necessary to do all of these things well might not be found in more than one or two of a dozen average people.

Therefore farmers must add to their native ability through study of management methods. This kind of business management may be learned and it is now being offered at many of the Agricultural Extension Centres in Canada. In some places it is being brought right to the farm through Management Associations.

Formation of Farm Management Association

Two Farm Management Associations, which are formed by farmers themselves, are now operating.

One, in Manitoba, has the following story to tell - as reported by Sol Sinclair, Head of the Department of Agricultural Economics, University of Manitoba:

"The Carman District Farmer's Business Association developed as a result of some of our farm accounting work done with a group of farmers in the Carman district. This group of farmers decided that they wanted the work extended. With our support they organized themselves into a farm business association. This is a formal organization of 75 farmers who have elected a council and an executive. Each farmer contributes \$35.00 a year towards the cost of carrying on the research on this project. Each has undertaken to keep a detailed set of farm records.

"This project is administered entirely as a research project by our department. For this purpose we are employing a farm management specialist whose task it is to visit the farm to aid them in maintaining their records, and in interpreting them at the end of the year.

"The cost of operating this research project is about \$12,000 per year.

"When this project is completed and the results flowing from it are transmitted to other farmers in the province we would expect that similar associations will grow in other parts."

(9)

VERTICAL INTEGRATION AND CONTRACT FARMING

(Extract from the National Farm Radio Guide, Jan. 5, 1959)

The term "integration" means "bringing together".

The farmer who hatches a setting of eggs, raises the pullets, grows the feed for them on his own land, mixes it himself, and feeds them himself; who gathers the eggs, cleans them and then delivers them to the customer, has a vertically integrated operation.

When a farmer, alone or contracted with his co-operative, combines in a controlled operation more than one of such functions as assembling, transporting, storing, financing, standardizing, processing or manufacturing, he, or his co-op, are practising "Vertical Integration."

When a farmer accepts management help, credit assistance, a contract price or a guaranteed market in return for an obligation to deliver to a certain firm a set amount of his product, he is a Contract Producer. He is a part of Vertical Integration.

Any Company which buys up or controls its sources of raw materials in order to ensure a stable supply is practicing Vertical Integration. Farm Co-ops have found this practise profitable in such lines as feed manufacturing, petroleum refining and fertilizer mixing.

To many farmers Vertical Integration means not so much just a contract but dependence on outside persons for markets, prices and above all credit. They see in it some form of control by the middleman.

These questions remain: What products are likely to be integrated? Is integration a threat to the family? To the farmer's independence? And to small and medium producers?

A prominent U.S. economist predicts that the next farm enterprises to be invaded by Vertical Integration will be the egg business, the hog industry, and finally, beef. Turkeys and chicken broilers are almost 90% integrated now, in the U.S.

(10)

TIME TABLES, AGRICULTURAL SCHOOLS AND COLLEGES

TIME TABLE

NOVA SCOTIA AGRICULTURAL COLLEGE

TRURO, NOVA SCOTIA

Diploma Course

First Year
(First Term)

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:30	Farm Management	Animal Husbandry Lab.	Animal Husbandry	Botany	Poultry	English
9:25	Botany Lab.	- do -	Agronomy	Horticulture	Co-operatives	Agronomy
10:20	- do -	Entomology Lab.	Seminar	Chemistry	Farm Management	Entomology
11:15	Animal Husbandry	- do -	- do -	Poultry	Agric. Engineering	Mathematics
1:30	Farm Management	Agronomy Lab.	Poultry Lab.	Horticulture	Agriculture Engineering Lab.	
2:15	- do -	- do -	- do -	Horticulture Lab.	- do -	
3:00	- do -	Chemistry Lab.	Chemistry	- do -	- do -	
3:45	- do -	- do -	--	Botany Lab.	- do -	

Note: (1) Each year of the Two Year Course is divided into two terms of equal duration.

(2) Number of students in First Year: 26.

(Time Tables - Cont'd.)

TIME TABLE
ONTARIO AGRICULTURE COLLEGE
GUELPH, ONTARIO

DIPLOMA COURSE

Agriculture & Horticulture

FIRST YEAR
Fall Term
"A" Division

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:10	English	Agricultural Mechanics	Civics	Zoology	Civics
9:10	Soils	Rural Leadership	Agricultural Mechanics	- do -	English
10:10	- do -	- do -	- do -	- do -	Field Husbandry
11:10	- do -	- do -	- do -	- do -	- do -
1:00	Zoology	Zoology	Field Husbandry	Agricultural Mechanics	Forestry
2:00	English	Agricultural Economics	Agricultural Mechanics	Agricultural Mechanics	Botany
3:00	Botany	Field Husbandry	Civics	- - -	- do -

Note:

- (1) The class is divided into "A" & "B" Divisions
- (2) The School Year is divided into two terms. In the second term the separation is made into general Agriculture and Horticulture divisions.
- (3) All students are required to take Physical Education classes in addition to the regular timetable.
- (4) Number of students in First Year: 89.

(Time Tables - Cont'd.)

TIME TABLE

SCHOOL OF AGRICULTURE

RIDGETOWN, ONTARIO

DIPLOMA COURSE

FIRST YEAR
"A" Division
"X" Division

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	Farm Management	Agriculture Engineering	Agriculture Engineering	Farm Economics	Mathematics
8:45	Horticulture	Animal Husbandry	Field Husbandry	Soils	English
9:30	Animal Husbandry	Chemistry	English	Animal Husbandry	Bacteriology
10:15	Soils	Zoology	Agriculture Engineering	Marketing	Field Husbandry
11:00	Field Husbandry	Botany	Veterinary Science	Farm Accounting	Civics
1:15	Agriculture Engineering	English	Botany	Animal Husbandry	Field Husbandry
2:20	- do -	Zoology	Field Husbandry	- do -	Animal Husbandry
3:25	- do -	Horticulture	English	- do -	Poultry

Note: (1) The First Year Students are divided in "A" and "B" sections for morning classes and in X, Y, & Z Divisions for afternoon classes.

(2) Number of students in First Year: 95.

(Time Tables - Cont'd.)

TIME TABLE

UNIVERSITY OF MANITOBA

WINNIPEG, MANITOBA

DIPLOMA COURSE

FIRST YEAR

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:40	Agricultural Engineering	Agric. Engineering Lab.	Agric. Engineering	Marketing	Livestock	Marketing
9:40	Study Period	- do -	Communication	Communication	Study Period	Public Speaking
10:40	Soils Lab.	Communication	Plant Science	Study Period	Plant Science	Citizenship
11:40	- do -	Study Period	Physical Education	Citizenship	Physical Education	Soils
1:30	Farmstead Planning	Poultry Lecture	Livestock Lecture	Farm Management	Assembly	
2:30	- do -	Poultry Lab.	Livestock Lab.	- do -	Agriculture Engineering	
3:30	- do -	- do -	- do -	- do -	- do -	

Note: (1) Associated Course

(2) Number of students in First Year: 20.

(Time Tables - Cont'd.)

TIME TABLE
UNIVERSITY OF SASKATCHEWAN
SASKATOON, SASKATCHEWAN

DIPLOMA COURSE

FIRST YEAR
Division "A"

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:30	Animal Husbandry	Horticulture	Animal Husbandry	Horticulture	Animal Husbandry	Vocational Club Work
9:30	Farm Motors	Farm Management	Farm Motors	Farm Management	- do -	
10:30	Soils	Farm Machinery	Soils	Farm Machinery	Soils Labs.	
11:30	General Assembly	Animal Husbandry	Rural Life	Farm Motors	- do -	
1:30	Motors Lab.	Crop Production	English & Public Speaking	Crop Production	Machinery Lab.	
2:30	- do -	Farm Management	- do -	Weeds	- do -	
3:30	- do -	- do -	- do -	Weeds Lab.	- do -	

Note: (1) The class is divided into two divisions for Animal Husbandry and Soils laboratories and into three divisions for Motors, Machinery and English periods.

(2) Students choose to be members of one from choice of Livestock, Agronomy and Farm Mechanics Clubs, meeting and conducting projects on Saturday mornings.

(3) Number of students in First Year: 54.

(Time Tables - Cont'd.)

TIME TABLE
SCHOOL OF AGRICULTURE
VERMILION, ALBERTA

DIPLOMA COURSE

FIRST YEAR
Division "A"

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:20	General Assembly	Animal Husbandry	Animal Husbandry	Animal Husbandry	Social Relations	
9:05	Horticulture	Field Husbandry	Field Husbandry	Field Husbandry	Horticulture	Dairying & Poultry
9:50	Mathematics	English	Mathematics	English	Mathematics	English
10:35	Farm Management	Science	Farm Management	Science	Farm Building	Science
11:20	Mechanics	Entomology & Beekeeping	Physical Training	Entomology & Beekeeping	Mechanics	Community Organization
1:30	Mechanics Lab.	Metalwork Shop	Science Lab.	Field Husbandry Lab.	Mechanics Lab.	
3:05	Animal Husbandry Lab.	- do -	Botany Lab.	Dairying & Poultry Lab.	Animal Husbandry Lab.	

- Note: (1) Metalwork labs are replaced by Farm Building labs in second half of term.
- (2) Classes are divided into two divisions for most lectures and into three divisions for all labs.
- (3) Number of students in First Year: 56.

(Time Tables - Cont'd.)

TIME TABLE
MACDONALD COLLEGE
QUEBEC, P.Q.

Diploma Course

Year: 1958-59
First Term.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:30	Farm Forestry 1a	Maths. 1	Poultry Husbandry 1	Horticulture 4	Poultry Husbandry 1	Farm Forestry 1a
9:30	Animal Husbandry 1	Botany 1a	Agriculture 1	Botany 1a	Animal Husbandry 1	"
10:30	English 2	Ag. English	English 2	Ag. English 1a	English 2	"
11:30	Entomology 2a	Agronomy 1a	Entomology 3a	Agronomy 1a	Agronomy 1a	"
1:30	Animal Husbandry 1	Horticulture 4	Poultry Husbandry 1	Entomology 3a	Botany 1a	
3:30	Ag. Eng. 1a		Maths. 1		Animal Husbandry 1	

(Time Tables - Cont'd.)

TIME TABLE

ECOLE SUPERIEURE D'AGRICULTURE

STE-ANNE-DE-LA-POCATIERE

COMTE DE KAMOURASKA, P.Q.

DIPLOMA COURSE

FIRST YEAR
1958-59 First Term.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00	Math.	Machinery	French	Shopwork	French	Botany
9:00	Economy	"	Economy	"	Math.	French
10:00	Religion	"	Math.	"	Social Sciences	Religion
11:15 11:45	Study	Study	Study	Study	Study	Study
1:30	Study	Study	Study	Study	Study	Study
2:00	Fertilizers	Horticulture	Soils	Fertilizers	Soils	Soils
3:00	Crops	Crops	Animals	Crops	Animals	Horticulture
4:30	Study	Study	Study	Study	Study	Study
6:00	Supper	Supper	Supper	Supper	Supper	Supper
8:00	Study	Study	Study	Study	Study	Study
9:00						

(Time Tables - Cont'd.)

TIME TABLE

SCHOOL OF AGRICULTURE

STE.-MARTINE, QUEBEC

DIPLOMA COURSE

FIRST YEAR

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:30	Rural Construction	Civics	Rural Construction	Civics	Rural Construction	Civics
10:00	Agronomy	Agronomy	Agronomy	Agronomy	Agronomy	Horticulture
11:30	Study	Study	Study	Study	Study	
1:30	Study	Carpentry	Study	Carpentry	Practical	
2:30	French	Carpentry	French	Carpentry	Practical	
4:00	Livestock	Horticulture	Livestock	Horticulture	Livestock	

Note: (1) Students quite generally return to their homes over the weekends.

(2) Number of Students in First Year: 40.

(Time Tables - Cont'd.)

TIME TABLE
FREDERICTON SCHOOL OF AGRICULTURE
DOMINION EXPERIMENTAL STATION
FREDERICTON, N. B.

Diploma Course

First Year

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Soils	Soils	Apiculture	Animal Husbandry	Dairy Products
10:00	Cereals	Poultry	Animal Husbandry	Poultry	Animal Husbandry
11:00	Entomology	Horticulture	Entomology	Horticulture	Mathematics
1:00	Mathematics	Motor Mechanics	Botany	Motor Mechanics	Horticulture
2:00	Cereals	- do -	Farm Accounting & Management	- do -	Genetics
3:00	Soils	- do -	English & Spelling	- do -	Botany
6:00 9:30	First Year Carpentry Farm Forum	Second Yr. Carpentry	First Year Carpentry	Second Yr. Carpentry	Films & Sports

Note: (1) The Two-Year Course is organized into a two-year cycle so that students of both years take classes together.

(2) Number of Students - First Year: 12
Second Year: 5

(Time Tables - Concl'd.)

TIME TABLE

CARLETON COUNTY VOCATIONAL SCHOOL

WOODSTOCK - NEW BRUNSWICK

Diploma Course

First Year

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 - 10:15	Academic	Academic	Academic	Academic	Academic
10:15 - 11:45	Shop	Shop	Shop	Shop	Agric. (1)
1:00 - 1:45	Agric. (1)	Agric. (2)	Agric. (2)	Agric. (1)	Agric. (1)
1:45 - 2:30	Agric. (2)	Agric. (1)	Agric. (1)	Agric. (2)	Agric. (2)
2:30 - 3:15	Agric. (1)	Agric. (2)	Agric. (2)	Agric. (1)	- -
3:15 - 4:00	Agric. (2)	Singing	Agric. (1)	Movies	- -

Note: (1) Shop includes Woodwork, Drafting & Blueprint Reading.
 Academic includes English, Arithmetic, Spelling & Citizenship.
 Agriculture (1) includes Field Crops, Sheep, Swine.
 Agriculture (2) includes Soils, Botany, Poultry, Insects.

(2) These studies are supplemented by an extensive study of a project conducted on the home farms of students.

(3) Number of students in First Year: 20.

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